



The 8sails Media Survival Guide

Beta Edition
Volume One



The Media Survival Guide

Notes on the beta edition

This guide was developed in greatest part during a sabbatical leave granted to me by the college where I teach in the Fall of 2011. As of this writing (in January 2012), most of the writing for the central text is complete.

The final five chapters deal with specialized, cross-media topics rather than specific media. These sections represent a new approach without a lot of direct precedent. So I'm taking a little extra time to tinker with their organization and flow.

However, I understand that – based on their personal learning styles – some students may wish to download the text in PDF format and read it straight through rather than one chapter per week as we get to it in class. Thus I'm making this “beta test” version of the guide available for those who are anxious to dig in and read ahead.

The term “beta” comes from the computer industry, where companies will release a “beta-test” version prior to actually distributing a final copy of a new piece of software. The beta version is designed to help smooth out problems, and it may lack some of the “bells and whistles” intended for inclusion in the final product. For example, you'll note that this edition lacks features such as an index, table of contents and page numbers.

This first volume includes the first eight chapters. The second half will follow in volume two just as soon as the final chapters are ready to go.

The Media Survival Guide

How to keep your brain alive in the 21st century infoscape

Media Literacy: An Introduction

We spend a ton of our lives in the company of the mass media. Surfing the web. Watching television. Listening to the radio in our cars. Reading books (yes, some of us still do that). And yet most of us aren't particularly media literate.

“Media literacy” is different from “literacy.” If you are “literate,” that simply means you're able to read. If simple usage was the only standard for media literacy, then every beer-swilling mook who plops himself down in front of an evening's worth of sports and porn would be media literate.

No. If your brain is going to survive the massive media onslaught that is the 21st century, you're going to need to learn to do more than just mindlessly consume. Through education and practice, you must develop the ability to think critically about what you read, watch and listen to. It isn't enough to respond to America's Funniest Home Videos with “heh heh, that soccer ball hit that guy in the man area.” You have to think about what you're seeing. Who produced it? What channel is it on? Why does this channel run this kind of programming? Why is it on at this particular time on this particular day? Who are the advertisers sponsoring the show, and what made them pick this particular program? What makes a soccer ball to the man area so all-fired hilarious?

That's critical thinking. That's media literacy. This form of mental self-preservation is as essential to your well-being as agriculture and self-defense were to our ancestors.

The Age of Information

As you may already have learned in a HIST class, many historians like to divide human history into ages. In the ancient world, civilization moved from the Stone Age to the Bronze Age to the Iron Age, each change heralded by new technology that improved people's ability to grow crops and kill enemies.

Your great grandparents (give or take a great or two depending on how old you are) were born in the Industrial Age, an era characterized by the growth of factories that mass-produced goods.

You, however, live in the Information Age. Though we still buy things made in factories, grow crops and kill enemies, we also generate an immense amount of information. Creation of facts, opinions, thoughts of all kinds is the primary job of an ever-increasing number of people.

And in order for it to be any good to anyone – and thus get people to pay for it – information has to be communicated.

Communication – Ideas in Motion

Simply put for our purposes, communication is the act of taking an idea in one person's brain and transferring it to another. Here's a quick, concrete example:

One Thursday several years ago, my wife was going to the store.

“Do you have anything to add to the shopping list?” she asked.

I looked it over. Milk. Eggs. Veggies. The usual suspects. However, I had a craving for Pop Tarts. Specifically Brown Sugar Cinnamon Pop Tarts, which of course are the best kind. So I jotted “BSC Pop Tarts” on the bottom of the list.

When Amy got back from the store, she looked a little cross with me. “I hope you have enough Pop Tarts,” she said.

I looked in the bag. She bought Blueberry Pop Tarts, Strawberry Pop Tarts and Cherry Pop Tarts.

So sometimes “close enough” isn't close enough when it comes to the motion of a thought from one person's head to another.

The grocery list was a particular form of idea transfer called **interpersonal communication**, which generally takes place between two individuals (my wife and I) in a particular place (our kitchen) at a particular time (Thursday). Another form is **public speaking**, like when a professor stands in front of a class and delivers a lecture.

However, the type of idea transfer we're concerned about in this Survival Guide is **mass communication**.

Mass Communication – The Media

Interpersonal communication and public speaking are fairly straightforward tasks. Mass communication, on the other hand, can be a little trickier.

We have to start with a **medium**, a thing that allows us to transfer our thoughts over time and distance to large numbers of people (hence the “mass”). For example, the authors of the Gospels have been mass communicating with people all over the world for nearly 2000 years through the medium of books. As you drive to work, odds are that somebody miles away from you communicates to you and a few thousand other people through the medium of radio. And right now as you look at this, I'm mass communicating to you and everyone else who reads these words via the Web.

In the Survival Guide, we're going to deal with eight media of mass communication divided into four categories:

- Computer media (one medium that includes the Web, social media and videogames)

- Visual media (movies and television)
- Audio media (recorded music and radio)
- Print media (books, newspapers and magazines)

Thanks to **media convergence**, the borders between the “Big Eight” are a bit fuzzy. For example, I read newspapers online via the Web rather than subscribing to the old-fashioned “dead tree” printed version. However, in general these divisions will help us break the media down into bite-sized chunks so we can chew them one at a time.

Computer Media

Of the Big Eight, this one’s the hardest to define. After all, computers are in your radio, in your television, in your car, in your phone, pretty much everywhere. But what we’re talking about more specifically here is mass communication that requires a device that can do a significant amount of thinking for itself rather than merely amplifying a signal or unscrambling a message.

Because this would be a huge topic if we tried to tackle it all at once, I’m going to break it down into three parts:

- The Web
- Social media
- Videogames

The most common and obvious of these media is the **World Wide Web**, a vast system of information sources linked together by a computer network called the Internet. If you’re reading these words on the Media Survival Guide site, then you already know at least a little about what the Web is and how it works.

Technically, **social media** is a subset of the Web, including sites such as Twitter and Facebook that people use to communicate with groups of “friends” or “followers.” Social media blur the line between mass communication and interpersonal communication. If a celebrity “tweets” something, millions of people read it. However, I use Twitter only to pass notes to my wife or myself. So I have an interpersonal-sized audience on Twitter (though I follow several people and groups with much larger audiences than mine, and in my defense I have a larger group of friends on Facebook).

Social media are also a relatively recent phenomenon, making it trickier to say for certain what it will be and how it will work in the future.

Videogames, on the other hand, have been around for awhile. In this section we’re going to consider a wide range of interactive media from console gaming systems to MURP environments online. Of all the media we’ll study, gaming is the most interactive, requiring you to constantly supply input rather than just sitting back and passively experiencing it.

Visual Media

Visual media employ motion pictures, images that create the illusion of motion. This kind of mass communication was first pioneered by the **movie** industry to create films that could be watched by theaters full of people. Our consideration of the topic will also include watch-at-home movies (DVDs, BluRay discs and the like), though this does tend to blur the lines between movies and ...

Television brings moving pictures into our homes directly from an outside source (such as an over-the-air broadcast, cable wire or satellite dish). If you're a typical member of American society, this is the medium you have the most experience with.

Audio Media

Audio media are the only forms of mass communication that don't require you to look at them while you're consuming them. Thus they're also probably the only forms of mass communication your boss will let you consume while you're at work (unless you're on your break or you have a really nice boss).

Recorded music is a relatively new (first developed in the 19th century) medium that takes advantage of one of the oldest of human pursuits. It's also an industry in a state of change thanks to new technology that has rendered older delivery formats obsolete. Yet the beat goes on.

Radio is important not only to keep you entertained while you're driving but also for your understanding of mass media evolution. It was the first medium to communicate with an audience with no visible connection to the source, and because it used the "public airwaves" to deliver its message, it developed a little differently than most of the other Big Eight.

Print Media

The three print media are older than any of the rest (indeed, books were around for centuries before any of the non-print media were thought up). All three have undergone changes in recent years, but at least so far all of them are still part of the infoscape.

Before the printed word, mass media didn't exist. Thus we'll pay a little extra attention to the birth of **books** in the 15th century, as it can still teach us a lot about why the media are the way they are in the 21st century. We'll also study the current state of the art. Think nobody reads books anymore? Think again.

The **newspaper** business is an industry in transition. At the dawn of the 20th century, they were one of the biggest, most profitable industries in America. Of course back then they had little competition for the attention of the media-hungry public. The dawn of the 21st century was a much different place, and newspapers found themselves scrambling for a dwindling share of their audience's time, attention and money.

Without a doubt, this corner of the publishing world is not what it used to be. But when we take a closer look at newspapers, we'll see that they still have an important – if less grand – role to play.

Magazines have a lot to teach us about the relationship between media and consumers. In the second half of the 20th century the industry, in the face of pressure from television, stopped targeting general audiences and started focusing on specialized sets of the overall market. This “segmentation” strategy was so successful that now it's the rule rather than the exception in the world of mass media. But is it still keeping magazines alive?

Convergence

Having divided the media up into chunks for easier study, we must now join them together. In the 21st century, the single biggest trend in the media industries is the blurring of distinctions between them. Newspapers on the Web, complete with radio-style audio and television-style video. Books that can be downloaded and read on mobile devices. Movies that resemble videogames. Videogames that play like movies. Think about it just a little and you'll be able to come up with a list of your own.

These trends are particularly important for anyone who wants to participate actively in media production. Back in the 20th century, training for a media career required selection of a specialty. A student studying newspaper reporting probably wouldn't learn much about television production, and vice versa.

But now thanks in part to improvements in technology, a single individual working on a news story can produce a written version for print and the Web, an audio podcast and a video. And that of course is just one example of the more complex job market that will await aspiring media professionals in the years to come.

The Media's Four Functions

Everything and everyone in society has a function. Schools and teachers educate students. Hospitals and doctors heal the sick. Lawyers do whatever they do.

The media have a part to play as well. Four parts, in fact:

- Information
- Entertainment
- Persuasion
- Socialization

To be sure, some media are stronger in some areas than in others. Traditionally movies have been more about entertainment than anything else. And some critics (myself included) think that some of the journalism industry's current financial problems are due in part to increased emphasis on entertainment at the expense of the newspaper's traditional emphasis on information.

But every medium performs all four of these functions to some extent. Take this text, for example. The primary purpose of a “text” is to provide you with information. However, long experience in and out of the classroom has convinced me that if I don’t do at least something to keep you entertained, I’ll hurt my chances of informing you. And I admit I’m also trying to persuade you to take a greater interest in making yourself media literate. As for socialization, the facts and opinions you pick up from the Media Survival Guide should help you to understand the world around you a bit better and form your own opinions about your role in it.

Information

Information is the most basic reason for us to communicate. When thoughts such as “look out for the cave bear” passed from one individual to another, they helped us stay alive. Even after thousands of years of living in civilized society, exchange of information – “look out for tornados headed this way” – still helps keep us safe. Indeed, as noted at the beginning of this chapter, the time we live in is often called the Age of Information.

Traditionally, “information” and “journalism” are closely related topics. Though the relationship between the two has become more complicated in recent years, journalists still make an excellent starting point for our consideration of the importance of informative communication.

Entertainment

One of our most ancient emotional desires is for **entertainment**. As the first humans gathered around their fires at night, they told stories to one another. This “tell me a story” desire has shaped our communication for as long as we’ve been able to communicate.

However, “entertainment” takes more skill than mere “communication.” Think about the last time you heard a five-year-old try to tell a joke three or four times before he finally gets the punch line right. The information was communicated, but it wasn’t as funny as if a professional comedian had told the same joke.

So entertainment isn’t always as easy as it looks. We’ll examine some of the “tricks of the trade” in order to better understand this important media function.

Persuasion

From the audience’s perspective, **persuasion** is the least desirable of the four functions. Who wants to imagine himself a brainwashed “puppet” of the media? Yet from the point of view of media owners and their employees, the ability to persuade is often stock in trade. If advertising doesn’t persuade consumers to buy products, then companies won’t pay to advertise. And with no advertising dollars coming in, the media must either shut down or find some other way to pay the bills.

Persuasion also goes beyond obvious cases such as advertising. The media are one of the most effective ways to persuade people to adopt particular points of view, positions ranging from stances on political issues to larger decisions about ethics and morality.

Socialization

Of the four functions, **socialization** is the hardest to pin down. Plenty of people begin their career paths with a thought such as “I want to write for a newspaper so I can inform my readers about what’s going on in the world” or “I want to be a singer so I can get rich and famous by entertaining people” or even “I want to design ads that persuade customers to buy my clients’ products.” On the other hand, if as a kindergartener you were thinking “I want to devote my life to defining social mores and helping people accept the value systems adopted by the media,” you were a weird little kid.

Further, concrete examples are harder to come by. Start at the low end of the radio dial, surf to the high side, and you’ll almost certainly encounter at least one voice trying to inform you about current events, one trying to entertain you with a song and one trying to get you to buy something. Radio stations that devote air time to openly and deliberately trying to define your role in society are fewer and farther between.

Nonetheless, this function is arguably the most important of the four. Audiences turn to the media primarily for information and entertainment. Advertisers pay for the media in hope that consumers will purchase their products as a result. But the socialization function of the media helps shape us as individuals, as communities, as nations and as a world.

The Three Players

Just as the media have four functions, the media “game” has three “players.”

- Corporations
- The Government
- You

These players control the media, determining what kinds of products the industry produces. The amount of influence each player exerts varies over time and from place to place, depending on several factors we’ll consider as we explore.

Corporations

Unless you live under a rock – and a really big one at that – you’ve already heard that large corporations control everything. In the media world that’s true enough, at least for the parts of the infoscape that involve large sums of money. But that’s relevant and it isn’t.

You need to understand what corporations are, because that will help you understand why they do what they do. By legal definition, a for-profit corporation exists for the purpose of making money. So by asking “how will this corporation make the most money in this situation?” you will drastically improve your chances of predicting their behavior.

For example, **product standardization** and **product differentiation** are extremely important marketing tools. They guide many corporate decisions about what the company will and won't spend money on. These principles give rise to **genres**, which we'll encounter in several of the media we study (especially music and movies).

The Government

In the United States we have a longstanding tradition of distrust of government, stemming back to the 18th century when we had to have a revolution to get rid of a bad ruler in England. Even today we still somehow just don't deal well with being told what to do, even if democracy does give us some control over our “bosses.”

That unease has shaped the relationship between the government and the media in this country. Every chapter has a section on media and the law, so we'll have plenty of chances to examine this relationship in greater detail.

And in our examinations of the media in other countries, we'll see that elsewhere in the world some governments have a great deal more control over their media than ours does.

You

Yes, that's right. You personally play two crucial roles in the mass media world:

- You're a media consumer
- You're a media creator (at least potentially)

First, you're a **media consumer**. How you spend your money has a strong influence on the marketplace of ideas. When you pay to get into a movie, your ticket money influences the studio's willingness to make another movie of that kind, starring that actor or created by that director. When you download a song from iTunes, you improve the singer's chances of scoring another recording contract.

In some media your influence is less direct. For example, your favorite radio station doesn't base its programming on your listening habits directly but rather on what their research shows people like you like to listen to.

You also “vote” with the dollars you don't spend on the media. Buy a ticket to a baseball game rather than a movie, and the movie industry loses money.

Sure, movie studio executives don't lie awake at night if you as an individual decide not to pay to see the latest Hollywood blockbuster. But if enough “yous” spend your money a particular way, even the largest corporations take note. As you have nearly absolute control over your own behavior and nearly no direct control over most other people's

actions, we'll make more progress if we focus on your relationship with the media and let others do the same for themselves.

Second, you have the potential to be a **media creator**. Rather than just passively consuming media content created by other people, you can create it yourself for others to consume.

Obviously this is part of your plan if you want a career in the media industry. Whether your ambition is acting, singing, writing, photography or any of the hundreds of other media careers, ultimately you'd like to get paid enough to make a living at it. However, depending on the medium, you may be able to get at least a start as a media creator using only the resources easily available to you right now.

Even if you don't plan to make a living in a media career, you'll still want an understanding of the people who do the work in mass communication. If you know what they do and why they do it, you'll have a better understanding of why the media are the way they are.

Further, you may already be a mass communicator without knowing it. If you have a blog or use social media sites such as Facebook or Twitter, those are all at least potentially forms of mass communication.

Topic Areas

In order to think critically – to become literate – about a particular medium, you need to understand six things about it:

- **How it developed over time**
- **How its technology works**
- **How it makes money**
- **How you can make money with it**
- **What ethical rules govern it**
- **What legal rules govern it**

Thus for each medium we study, the Media Survival Guide includes a section on each of these six topics. As we go, we'll find that the subjects sometimes blend together. For example, in order to understand how current technology works, sometimes we have to back-track a little and learn about its historical development.

In addition, each medium influences us as individuals and as a society. This influence is keenly felt in five specific areas:

- **Race** and the roles we play based on our ethnicity and national origin
- **Gender** and the roles we play based on our sex and sexual orientation
- **Class and Culture** and the roles we play based on our wealth and upbringing
- **Sex and Violence** and the roles such controversial content play in our lives
- **Global Media** and the international marketplace of ideas

We'll consider these influences primarily through the use of case studies. Starting with an event in media history, we'll think about what we can learn about social roles based on what happened in the case we study.

History – How the Medium Developed Over Time

As Bob Marley once observed, “If you know your history, then you will know where I’m coming from.” The media are the way they are because of how they developed from their points of origin to today. In some cases, entire media (such as the Internet) have sprung up within the last decade or two. In other cases (such as books), the media have been around for centuries.

Many textbooks take a lengthy, narrative approach to history. They give you long, tedious paragraph after paragraph throwing names and dates at you and expecting you to sort it all out for yourself.

The Media Survival Guide, on the other hand, focuses on key moments and key players. For example, you won’t be asked to read 40 pages on the entire history of the recording industry. Instead you’ll learn about specific moments that made important changes in the medium, such as when Emile Berliner invented the first commercially-successful record player or when CDs replaced LPs in the 1980s.

You’ll also learn about individuals whose work made a difference in the media we’re studying. But this won’t be biography for biography’s sake. For example, when you learn about John R. Brinkley you won’t be memorizing his name on a list of radio station owners from the 1920s and 1930s. You’ll learn about what he did and how his actions influenced what you hear on the radio today.

Our study of history will also emphasize social importance. In other words, you’ll learn not only about how specific media developed but also how that development influenced the history of society as a whole. And how social history in turn helped shape the media.

Technology – How the Medium Does What It Does

If you’re the sort of person who likes to take things apart to see how they work, you’re going to love our technology discussions. We’ll start by learning how each medium moved through the three stages in the creation of new media technology.

In the **Innovation** (or **Nerd**) **Stage**, people in white coats working in labs or tech nerds working in their garages come up with something new that does something better than the way we used to do it.

In the **Development** (or **Marketing**) **Stage**, somebody with money says to herself, “Hey, look at what those nerds are doing! I’ll bet people would buy that if it was marketed well.” Some new technologies never make it past this stage, failing to catch on with the public or losing the battle to a competitor.

Those that survive reach the **Acceptance** (or **Mass Medium**) **Stage**. At this point enough consumers buy the new thing to make it worthwhile for companies to market media for it.

It may have taken awhile to get people to buy CD players, but once the price went down a bit and enough people bought them, record companies started manufacturing CDs in the millions.

Beyond tech history, we'll also take a look at **how current state-of-the-art technology works**. You won't leave this guide with the knowledge required to build your own digital movie camera, but you will at least understand how a digital movie camera works (and why they're an improvement in many ways on older movie cameras that use film).

Then we'll move beyond theory to look at how technology actually works in the workplace. The devices we use to create media dictate the **workflow** procedures we use to do our jobs.

The Industry – How the Medium Makes Money

In a free market economy such as ours, not much gets done that doesn't make money in one way or another. And the media are certainly no exception to that rule. So we'll take a look at exactly how each medium turns a profit, with an eye on future trends and how they'll affect corporate bottom lines.

We'll also at least dabble in the question of who owns what. This is a tricky issue, because mega-corporations trade companies the way kids used to trade baseball cards. Monitoring exactly which corporation owns what media company is a full-time job that I admit I can't keep up with. But we'll at least get a "lay of the land" for the holdings of the major media players.

Careers – How You Can Make Money in the Medium

One of the most consistent gripes teachers get from students goes something like "I didn't learn anything worthwhile in this class. How is any of this supposed to help me get a job?" Well, I'd hate for you to walk away from the Media Survival Guide without at least a few helpful career pointers.

We'll start with job opportunities in the corporate world, simply because such positions are at least a little more likely to come with a steady paycheck and health insurance. Our discussion will include not only entry-level positions you'll be after right out of college but also how you move up the ladder and where you might eventually end up.

But the world is more than big corporations. So we'll also take a look at the do-it-yourself job market. Whether you want to try freelance work for established companies or start an entirely new business on your own, opportunities abound (depending, of course, on what exactly you want to do).

I'll also find you some advice from people currently working in the media about how to get started, including everything from what skills you need to acquire to what you should include on your résumé.

Ethics – What Ethical Rules Govern the Medium?

You've heard the criticisms already. "The media are immoral. They're bad for America. They're out to corrupt our kids. All they care about is money, and they don't give a crap if what they do hurts people." Perhaps. But then again, perhaps not.

You aren't required to give up your membership in the human race just because you become a media professional. So we'll take a careful look at some of the ethical decisions media pros have to make, and you can think about how you might react if you were in their shoes.

At most colleges you can find a course in the PHIL part of the catalog on Ethics. At their worst, these are stuffy presentations of ancient texts robbed of any useful context. Personally, I prefer philosophy in the real world to philosophy in an ivory tower. So we'll consider some important philosophers as we go, but we'll always be careful to apply their thinking to practical situations rather than merely memorizing them in the abstract.

Industry self-regulation stands on the edge between ethics and law. Technically the rules industries apply to themselves aren't laws, so we'll consider them as matters of ethics. However, in their operation and effect they have a lot in common with regulations imposed by the government. And in the United States, where we've placed strict limitations on the government's ability to control the media, industry self-regulation is often the biggest limitation on content.

Law – What Legal Rules Govern the Medium?

As already noted, in the United States the government has only a limited power to control the content of the media. This limitation is imposed by the **First Amendment** of our Constitution, which prevents Congress from making laws "abridging the freedom of speech, or of the press." That controls big issues such as the government's ability – or lack of same – to prevent publication before it occurs.

However, the First Amendment isn't an impenetrable force field against all government restriction on the media. Whenever someone files a lawsuit against media professionals, courts have to decide if Constitutional or other protections safeguard the speech in question. The rules they've come up with can be tricky (just the way lawyers like it), but we'll cover them thoroughly enough to give you an idea of what the media can and can't be successfully sued for.

Even in the United States, the government does have some ability to regulate the media in some limited contexts, such as over-the-air radio and television broadcasts. So we'll have a look at those as well.

Media Influence Case Studies

The media play a powerful role in our society, and thus they have a strong ability to influence social values. Thus if our brains are to survive, we have to carefully consider

how they influence us. The Media Survival Guide tackles this issue by breaking it down into five areas:

- Race
- Gender
- Class and culture
- Sex and violence
- The global marketplace

We'll examine each area using **case studies**, examples of the impact the media have in real people's lives. And as we study these problems, often we'll find that they're interconnected. A problem of racism in the music industry may prove to be connected not only to racism in other media but to class and culture discrimination as well.

Race

Here's a topic that makes just about everyone uncomfortable. A century and a half have passed since the Civil War, but still the long-term effects of the age of slavery linger. To be sure, we've made some progress. Racially segregated classrooms are a thing of the past (unless the whole school is segregated, that is). But if true integration is our goal, we still have a long way to go. A trip down the radio dial or to a movie theater will bear this out.

Nor are the colors of racial problems limited to black and white. If there's a way to determine how people differ based on the color of their skin or the nation of their ancestors, that difference can be used as a basis for discrimination.

The media play a big role in the reinforcement of stereotypes. Indeed, portrayal of ethnic groups can turn into an awful spiral of discrimination, in which the media mirror prejudices about how members of a group behave and that portrayal then teaches group members that that's how they're expected to act.

In order to get past such discriminatory depictions, we need to pay careful attention to how the media deal with racial issues. The topic isn't always a lot of fun to talk about, but the work is rewarding as well as important.

Gender

Gender discrimination is as old as society itself (though no two societies deal with the problem in exactly the same way). Such an ancient prejudice is naturally hard to get rid of. So it lingers in many ways that wouldn't be acceptable for any other kind of prejudice. If the movie industry's Academy Awards for acting were divided into "white" and "non-white" categories, protestors would burn the auditorium down. But few people give a second thought to the "actor" and "actress" distinctions. Further, some kinds of Oscars (particularly for directing) that aren't segregated by gender almost always go to men.

As a society we're also still coming to grips with sexual orientation issues. In recent years we've seen a ton of argument about whether same-sex couples should have the same

marriage rights traditionally given to opposite-sex couples, and at this point the debate appears far from over. This unease is also reflected in society's mirror, the media.

Class & Culture

Two young people meet and fall in love. But their families don't get along, so they keep their relationship secret. The drama ends tragically with the deaths of both star-crossed lovers.

Shakespeare's *Romeo and Juliet*. Baz Luhrmann's *Romeo + Juliet* (set in Southern California but using the original script). *High School Musical* (minus the deaths, of course). *Such Tweet Sorrow* (a version of the play produced in part by the Royal Shakespeare Company and staged as a series of messages on Twitter, also making use of YouTube for pictures and video).

So the same story can be told in many different ways. Some versions (Shakespeare) would traditionally be considered "high culture," while others (Disney) are more "lowbrow." Such distinctions help determine how media critics respond to them as well as whether or not certain audience members will spend money to see them.

Cultural distinctions are often closely tied to social class. Members of the upper classes tend to listen to different music than members of the lower classes, and our dwindling middle class tends to find itself somewhere in between the two. Class differences are also often enforced based on religion and other matters tied closely to upbringing.

Thus media bias that reflects differences of class and culture can teach us a lot about our social roles.

Sex & Violence

Just about everybody is squeamish about something. Personally, my "something" is maggots. Can't stand 'em. Anytime I encounter them (which thankfully isn't often), all I can think about is getting rid of them as quickly as possible.

As a society, our "somethings" are sex and violence. We're particularly squeamish about anything sexual. A movie can dump gallons of blood onto the screen without jeopardizing a PG-13 rating, but any nudity beyond a brief glimpse of a bare butt tends to be an instant ticket to an R.

Which is not to say that violence isn't a tricky topic as well. Particularly in media aimed at kids, industry self-regulation has traditionally placed sharp limits on the amount and kind of violence that can be portrayed.

So as we go, we'll devote some thought to the definitions of "sex" and "violence" and how their presence in the media affects audience members.

Global Media

The majority of the Survival Guide is devoted to study of media in the United States. Our target audience lives here, and readers who are using this guide to prepare for a media career will most likely be looking for a job here as well.

However, the U.S. media market doesn't exist in a vacuum. Thanks to the ease with which data flows across borders, it's now possible to consume media from other countries with an ease undreamed of in years past.

The media in other countries also have a lot to teach us about our own. By contrasting what they're doing with what we're doing, we can understand some of the benefits and drawbacks of our systems. Totalitarian regimes in particular tend to spawn media products that are heavy-handed bits of nationalism but often at the same time subtly subversive. And if nothing else, if someone in another country is doing something great that hasn't been done in the United States, then perhaps it's time we tried it here as well.

Conclusion

At the end of each chapter, the Media Survival Guide includes support materials such as glossary terms, photo credits and the like. These pages are more for reference than for reading, but they're there if you need them.

Whew! That's a lot to start with. But if you've read the whole introduction, you've got a better idea of what this guide is all about. If at any point in the chapters to come you start to feel lost, consider referring back to the introductory materials. They'll help bring you mindful of why whatever we're doing happens to be important.

Please enjoy the rest of the Media Survival Guide. If you have feedback, please let me know.

The Web

Medium of media

If you're reading this, you shouldn't need an introduction to the Internet. Just to get to this page, you've already mastered the basics of using a browser to access information on this amazingly powerful medium. Even if you're reading the PDF version, you had to go to the Web to get it (and if somebody else did it for you, get her to show you how she did it and you'll be up to speed on how the Internet works).

The Web literally puts the world on your computer. You can now access media produced not only by huge corporations but also by ordinary people much like yourself. Indeed, you may already be a "web publisher" without thinking about it in those terms (we'll take a closer look at social media in the next chapter).

Thus I shouldn't have to work too hard to sell you on the idea that the Web is worthy of your attention. So we'll focus instead on understanding why the Internet works the way it does and what you can do with it.

History

Key moments

The microprocessor

In the beginning, computers were as big as houses. ENIAC, the world's first electronic computer, weighed 30 tons, took up 1800 square feet and sucked up enough electricity to power 150 homes. Not exactly a desktop model.

The reason early computers were so big and hungry (and of course expensive) was the vacuum tube. Or to be more precise, it was the thousands and thousands of vacuum tubes that made up the computer's "brain." These tubes looked a little like light bulbs. Like light bulbs, they tended to burn out and need to be replaced. Unlike light bulbs, however, they didn't light up. So figuring out which tube had to be replaced was a tedious task.

The computing world took a big step forward in the late 1940s and early 1950s with the invention of transistors. These new devices did the same thing as vacuum tubes, but they were smaller, more energy efficient, cheaper to produce and didn't burn out. Computers were now the size of cars, a great improvement over house-sized machines but still not exactly ready for the consumer market.

The microprocessor was the final piece in the puzzle. Starting in the 1960s, engineers figured out how to make integrated circuits – "chips" – that did the job of dozens, then hundreds, then thousands, then millions of transistors. Microprocessor technology made it possible to fit entire computers onto single chips, allowing NASA to put enough

computing power into a space capsule to make a trip to the Moon and allowing manufacturers back on Earth to market pocket calculators.

By the early 1980s computers fit into briefcase-sized boxes and no longer cost a small fortune. Businesses from large to small could afford to put them on employees' desks, and people could buy them for home use as well.

The Internet

On October 4, 1957, people in the United States got a bad scare. With almost no advance notice, the Soviet Union launched Sputnik 1, the first human-made object ever sent into space. In practical terms it didn't do all that much, just orbited around the Earth broadcasting a beeping radio signal. But for Americans, who assumed they had a strong tech advantage over their Communist rivals, the news came as quite a shock.

The U.S. government responded to the crisis with a flurry of military and scientific projects designed to help us get caught up. One of these initiatives was the Advanced Research Projects Agency, a new section of the Department of Defense designed to coordinate the development of new military technology.

Several of the labs, military bases and universities working with ARPA had computers, but sharing data between them was a problem. Information had to be saved on bulky reels of magnetic tape and physically transported from one location to another, causing delays and posing security problems. If only the computers could talk to one another directly.

So engineers started work on a network, a series of connections that would allow computers to share data with one another. In 1968 the ARPAnet was born. Four universities in California and Utah started sharing data with one another. By 1970 it expanded to the East Coast, and by 1975 it was declared fully operational.

Thus the Internet was born. Okay, it took another step or two to convert the original military-only network into the massive communication giant we all know and love today. But the image of the parent can still be found in the child.

In particular, then and now the nets follow a distributed model. That means if one part of the network is disabled, all the other parts can still send information to one another. Back in the 1970s this feature was essential because early network hardware tended to fail more than it does now (yes, it actually used to be even worse), and on a distributed network a failure at one site wouldn't shut down the whole show. It also made the network more resistant to enemy attack, an important feature for a military operation.

You'll find that distributed structure mirrored in the observation that "nobody owns the Internet." Individual parts belong to businesses, governments, colleges and individuals (people like you if you're using your personal chunk of the Internet to read these words). But nobody owns or controls the whole thing.

The World Wide Web

A lot of people treat “Internet” and “Web” as synonyms. So let’s start with an understanding of the difference. The Internet is the network (or network of networks) that allows computers to communicate with one another. The Web, on the other hand, is the software – the “medium” – that defines how that communication works.

In the early 1990s programmers began to develop systems that used hyperlinks to connect information. These links could be used to “navigate” around the Internet, accessing information on whatever computer it was stored. Then in 1993 a team at the National Center for Supercomputing Applications designed Mosaic, the web’s first browser. It used HyperText Markup Language to standardize the way information was displayed on screens, making the web much easier to “surf.”

This new accessibility paved the way for people outside computer nerd circles to use the Web. By 1996 many businesses began setting up web presences, and the rest as they say is history.

Key players

The PC

As you learned in the Survival Guide’s introduction, new technology moves from the nerd stage to the mass medium stage only if a company invests some money in developing it. In the case of the personal computer, that company was International Business Machines. Several companies in the 1970s sold computers for home use, but IBM – with years of experience building big, expensive machines for the government and large corporations – was the first to put enough cash and marketing muscle into personal computers to make them sell.

In 1981 the company released the Personal Computer Model 5150, better known as the PC. MS-DOS, software designed by a small start-up company called Microsoft, controlled the machine.

Thanks to a loophole in the contract between IBM and Microsoft, the software company was free to sell DOS to anyone who could build a computer with hardware designed to run it. So several other companies jumped on the PC bandwagon, marketing “clones” or “PC compatibles” for lower prices than what IBM was charging.

Thus the personal computer found its way into businesses, schools and homes where no previous system could have gone.

Apple

Apple Inc. already had a good thing going into 1980. In the late 1970s the company controlled a large share of the limited market for personal computers with the Apple II. But the new decade brought bad fortune. The Apple III, the company’s latest and greatest, developed stability problems and had to be recalled and redesigned. But worse, competition from IBM and its clones shoved Apple to the sidelines.

But the company started bouncing back in 1984, launching its new Macintosh computer with an expensive, one-time-only ad that ran during the Super Bowl. Though the new system wasn't as popular overall as PC-compatibles, it found acceptance in some markets such as graphic design.

Though Apple didn't immediately seize control of the industry, it introduced the highly popular idea of making computing easier with a Graphical User Interface. Microsoft responded by creating Windows, though it didn't find GUI success until Windows 3 in 1990.

The Macintosh line continued to gain in popularity throughout the 90s and 00s. Then Apple leapfrogged its way into the lead in the personal tech market with its line of iProducts: the iPod, iPhone and iPad.

AOL

By the early 1990s personal computers found their way into many homes. Though they were useful for typing letters, balancing checkbooks and playing games, they suffered from a serious limitation: isolation. Without a connection between home users and the world of information available on the Internet, computers couldn't truly become a medium of mass communication.

At the time hooking a PC up to the outside world required a modem that could dial out on a phone line and connect to ... well, to start there wasn't a lot to connect to. For some time a system called CompuServe was a popular dial-up destination, but it catered mostly to "techie," people who already knew their way around computer systems.

But then America Online – originally a downloadable game company – started an online service with a couple of interesting twists. First, it set up an easy-to-use GUI, making the service accessible even to people without tons of computer experience. And second, it promoted the heck out of itself. For some time it aggressively distributed free AOL software discs, mailing out so many that people began to devise unintended, creative uses for them.

At first AOL subscribers could access only services on the AOL system itself. Eventually, however, the company supplemented its own offerings with connections to Usenet and the Web.

For some time AOL dominated the home market, hitting a high water mark of 30 million subscribers. It even wrangled an expensive merger with media giant Time Warner. But as the dial-up market gave way to faster Internet connection technologies, AOL's sun slowly began to set.

Netscape

The Internet connects computers. The Web provides a framework for getting around. But human users need an interface to help them use the resources the net provides. The most popular software tool for using the Web is the browser.

Among early browsers Netscape was the most important. It was based on Mosaic, the first browser developed by the National Center for Supercomputer Applications at the University of Illinois. After graduation, co-writer Marc Andreessen moved to California and helped establish Netscape Communications.

The company provided its browser, Netscape Navigator, free of charge to anyone who wanted to download it. As web usage spread, so did Netscape's popularity. In 1996 it hit the high point of its market share, with nearly 80% of people surfing the web using Netscape as a surfboard.

But then the company ran up against a serious rival: Microsoft. The manufacturer of Windows started bundling its own browser, Internet Explorer, with every copy of the operating system. With Explorer pre-installed on their computers, many users saw no reason to take the extra steps required to get Netscape up and running.

Seeing the writing on the wall, Netscape released its code base (the software that made it work) under an open source license, meaning that anyone who wanted to adapt it into his own browser was free to do so. AOL bought Netscape Communication and eventually stopped supporting the browser.

However, the open source – which came to be known as Mozilla – led directly to the development of other browsers, including the currently-popular Firefox system.

Role in society

Memes

Cats that play the keyboard. Cats that want cheeseburgers. Cats that jump in and out of boxes. Cats that merge with Pop Tarts and fly around outer space shooting rainbows out of their butts.

Welcome to the wide, wonderful world of memes.

Once the web became popular enough to count as a mass medium, trends started to appear. Unlike the well-manicured messages from other media, these “memes” arose spontaneously with no particular logic. For whatever reason, some images, phrases and the like just seemed to catch on.

For example, at some point in the nebulous past one player in an online game asked a competitor where he was. “Im in ur base killin ur d00dz” came the reply. Somehow this managed to give rise to the “I’m in your X Ying your Z” meme, in which the original phrase was adapted in many strange ways, such as a photo of a cat eating a burger captioned “I’m in ur house eatin’ ur cheezburgers.”

Though memes are easy to criticize as frivolous at best and stupid at worst, they’re significant parts of our media culture for a couple of reasons. First, they arise more-or-less spontaneously, the work not of trained media pros but of average web users employing a little amateur ingenuity. And second, the inherent popularity of memes appeals to marketing folks, who seek ways to exploit them to sell products (I’m in ur awesome concert drinkin’ ur delicious, ice-cold Pepsi).

Technology

Origins (the nerd stage and beyond)

Networks

Networking computers together involves more than connecting them with some wire and hoping they can work it out between themselves. Naturally a full consideration of the inner life of computer networks is well beyond the scope of a Survival Guide entry (not to mention my own technical knowledge about the subject). However, a few net basics will help us get a handle on what we're doing.

At their most basic level, networks aren't generally thought of as networks. A computer with a scanner and a printer directly connected to it is technically a Personal Area Network.

The next step up is the Local Area Network. Some LANs aren't too complicated; Appletalk used to be a simple way to connect a roomful of Macs together without too much fuss or expense. But for anything bigger, the business gets tricky. Even a simple wireless network (like the WiFi hub I use at work or even the less sophisticated one I have at home) requires sophisticated tech to make them run.

At the opposite end of the scale, Wide Area Networks span regions, countries, and in the case of the Internet the entire inhabited world. Often WANs are actually networks of networks. The Internet isn't one single network. Instead, it's an interconnected "web" of smaller LANs and WANs.

The cloud

Without data, computers are useless. Everything you look at on the web – the text you're reading, the pictures at the top of the page, the links and buttons that allow you to move from page to page, even the locations themselves – is made up of bits of information – data – stored on a computer somewhere. And if you want to save data on a long-term basis, it needs to be stored somewhere.

Storage is divided into two categories: internal and external. In general, internal storage is for information that you'll need to access regularly on your computer and external storage is for data you need to take with you to another location.

For some time now the standard device for internal storage has been the hard disc drive. Built into the chassis of the computer itself, this set of magnetic discs can store large amounts of data and access it rapidly. In addition to the files you're actively using, the hard drive stores your computer's operating system and other software you use to do what you need to do.

For external storage, on the other hand, technology changes at a faster pace. The earliest removable storage devices for home computers were cassette tapes, the same kind used for recorded music. These were ever so slow and unreliable, but they were quickly

replaced by floppy discs (thinner, cheaper cousins of hard drives). Later innovations included CD-ROMs, Zip discs, and the currently-popular USB (or thumb or jump) drives.

Now, thanks to the web, we have “the cloud,” a new term for the old practice of storing files on a server somewhere else on the Internet rather than on your personal computer. The cloud has advantages over local storage, such as accessibility (you can get to your files from anywhere on the Internet) and security (the server’s owner backs it up, so you don’t have to worry as much about a crash eating all your files). But it has drawbacks as well, such as accessibility (in some locations Internet access is painfully slow or even nonexistent) and security (files on servers are more vulnerable to hackers because they’re “out there” rather than on your individual machine that’s harder to find).

Many projects make use of multiple storage technologies. Work on this Survival Guide was completed using a combination of Word files stored on my local computer and outlines and notes stored in “the cloud.”

How it works (the state of the art)

Nets and domains

The Internet is a vast network of networks. The technical way this works gets complicated in a hurry. So here’s a quick run-down of how I’m using it to work on the Media Survival Guide. As you’re reading this, think about how you use the Internet for your own work.

I did most of the writing for the core sections of the Survival Guide (such as what you’re reading now) as part of a sabbatical, so I was working mostly from home. The Mac on my desk is connected to a WiFi router (a basic wireless LAN in my house), which is in turn connected to telephone lines owned by the phone company. They connect me to my Internet Service Provider, which happens to be AT&T. As the name implies, my ISP connects me to the Internet. By connecting to AT&T’s service, I can reach anywhere else on the net.

I accessed literally thousands of other computers in the course of doing research and setting up links for the Survival Guide. As I was working, I stored my notes and links on a wiki (a simple web page) on the Wikispaces server. As the guide expands, I continue to add links to the wiki until they’re ready to be integrated into the guide itself.

Back on my local computer, I use Dreamweaver (a web design program) to put pages together. Then I use my network connection to upload files to GoDaddy, the company whose servers host the 8sails web site.

“8sails.com” is the domain I own that reserves a location on the World Wide Web where my uploaded files can be found. It assures that when you go looking for the next section of the Survival Guide, it will be where your computer can find it. As you can imagine, that makes domains potentially highly valuable. Serious legal fights have erupted over who owns what on the web.

So it takes all the machines and networks listed just to get something as simple as the Survival Guide from me to you. Of course each step involves a combination of hardware

and software too complex to list here. And if you're reading this as a PDF or on Kindle, that's even more tech to consider.

Browsers

The browser is the go-between that takes information on the web and displays it on your computer in a useful and hopefully visually appealing way. They take files full of HTML commands and display them according to the commands' instructions.

As already noted, the first big browser was Netscape, and the code for it eventually became Firefox. Both Microsoft and Apple have their own browsers (Explorer and Safari, respectively). Internet giant Google has a browser called Chrome. You can also find other browsers out there, such as Lynx and Opera.

For the most part browsers all work the same. They have to. Otherwise web designers would have to create not one web site but several, one for each different browser. Fortunately for designers and users alike, web browsers all start with the same HTML instructions and obey them in pretty much the same way.

However, some discrepancies do occasionally crop up. Thus designers can generally adopt a good-for-one-good-for-all approach, but advanced features still have to be tested in more than one browser to avoid glitches that can affect a lot of users.

HTML

HyperText Mark-up Language is the computer code that makes the web work. It defines how information is displayed on your screen in your browser, and it simplifies how you move from page to page and from site to site.

HyperText Transfer Protocol uses Uniform Resource Locator addresses to find pages on the web. To get directly to The Herd (the Media Survival Guide's home page), you type "http://www.8sails.com/msg.htm." That tells your browser to use HTTP to go to the Herd's URL. Most browsers are smart enough to know that you're using HTTP, you want to go to an address on the World Wide Web and that you're probably looking for a file full of HTML commands. So if you forget to type everything except "8sails.com/msg" you'll still probably end up where you need to go.

Most of the rest of HTML tells your browser how to display the page on your screen. Here's a look at the instructions that go into displaying the page you're looking at right now:

Needless to say, even simple pages can require complicated sets of commands to make them work.

Search engines and portals

There's no way to tell exactly how much information is available on the web. We can't even tell how many sites there are. We can make a reasonably good guess about how

many domains are actively registered (nearly 134 million as of this writing), but many of them aren't actually attached to active web sites.

Of the sites that actually exist, some of them have only a single page (catsinsinks.com) while others include thousands (8sails.com). The amount of information accessible from a single page also varies. Catsinsinks.com may only have one page, but you can keep clicking the "show me another cat in a sink" button and view a truly astonishing number of pictures of cats in sinks.

So in this vast sea of information, how do you find the one perfect page that tells you exactly what you need to know? If some kind soul provides you with an exact URL, then you're in business. Otherwise you'll probably need to use a search engine.

As of this writing, Google is by far the most popular search engine, processing more than 70% of all Internet searches. Yahoo! and Microsoft's Bing also see significant usage.

Some sites seek to be more than simple search engines. In addition to helping users "surf the web," they also supply at least some original content of their own. AOL offers subscribers discussion areas and other resources in addition to its search features. Search giant Google now owns a host of services, including Google Documents, Gmail and YouTube. Such multi-service sites are sometimes referred to as "portals," as they're sort of windows to the web world rather than just simple search processors.

Workflow in the workplace

From thought to web

There are three ways to put a web page together.

First, you can do it from scratch by writing the HTML code yourself. For simple (and I do mean simple) pages, that isn't much of a problem.

For more complex pages, web design software comes in handy. It gives the designer a what-you-see-is-what-you-get look at how the page will appear in browsers, making it easier to incorporate links, graphics, animations and other more complex elements. Such software also includes functions that automatically upload files and keep things organized on the server.

For some sites, however, direct design by humans isn't practical. Many blog sites cater to people who just want to post their thoughts (and maybe a photo or two) rather than getting caught up in the complexities of how the pages are actually put together. And big Internet retailers such as Amazon would have to employ a legion of designers if they put together a human-made page for every product they sold.

Thus such operations tend to use Content Management Systems. These are basically programs that design pages automatically. Supply them with some basic information (what text is supposed to go on the page, how much a product costs and so on), and they do the rest of the work. CMS software creates pages, makes sure that they have all the proper links and that other pages link properly to them, and uploads them to the server all with little input from humans.

Industry

How the industry makes money

If paywalls don't work, what does?

People won't pay directly for web content. Like most truisms, this one has a few exceptions. But for the most part people are used to being able to access everything on the web free of charge. Companies that try to set up "paywalls" (i.e. start charging for access to their material) rarely meet with a lot of success.

So if you can't get people to pay for what you publish on the web, how can you make money with this massive medium?

The most obvious way is to earn money the old fashioned way: sell something. If you can't get people to pay for your web content itself, then use the web to promote sales of something else. Many large corporations regard the web not as a profit center on its own but as a way to get people to buy whatever they manufacture, sort of like a big, elaborate advertising system.

And speaking of ads, that's the way to make a more traditional media approach pay off. Readers may not be willing to give you their money directly, but if you have enough people visiting your site and looking at your pages, companies may well take an interest in running ads on your site. Services such as Google's AdSense make this source of potential revenue easy to implement even on basic web sites. All web designers have to do is set aside short, wide spots for **banner ads** or thin, tall spaces for **skyscrapers**.

Who owns what

Net neutrality

Nobody owns the Internet. You've probably heard that a thousand times (including at least once or twice already in this chapter). But that doesn't necessarily mean that nobody controls significant chunks of it.

As we'll learn later in the Media Influence Case Studies section, some countries place strict limitations on their citizens' web usage and punish violators severely. In the United States the government doesn't have the authority to restrict the web other than use of the Internet to commit crimes such as trafficking in child porn. Unfortunately, that leaves a serious issue unresolved: if companies that own chunks of the Internet start imposing their own content restrictions, will the government do anything to stop them?

On the surface this might seem like a question that doesn't bear asking. Why would an ISP bother restricting the content its customers could access? If the company that sold you Internet access suddenly cut you off from your favorite sites, wouldn't you fire it immediately and switch to a different service? Further, it seems like more trouble than it could possibly be worth. Why would an ISP care what sites you used or didn't use?

In the real world, however, access is a big money issue. At home I'm using AT&T as an ISP, and among other things I use my home Internet connection to watch movies on Netflix. From the phone company's perspective, I'm a couple of kinds of problems. First, when I stream movies to my computer or television, I'm using a lot more "bandwidth" (tying up more of the company's resources by downloading a lot more data) than if I just used my connection for email and course work. Second, if I get all my video entertainment from Netflix, I'm not likely to pay extra for AT&T's UVerse television package.

So if the phone company decides that I have to pay extra to use enough bandwidth to access Netflix, I can just switch to a different ISP, right? But whom can I switch to? Time Warner provides Internet service in my neighborhood, but they're in the same boat as AT&T, with a cable package they want to sell me and lines they don't want me to tie up. Sure, there are other ISPs out there as well, but how long before they develop the same control issues or get bought up by a bigger company with the media conglomerate attitude about my net usage?

As things stand now, the FCC frowns on predatory practices such as blocking certain web sites from services. But Congress can override the commission. And of course Congress is vulnerable to lobbying from guess who.

Careers

In the corporate world

Drawing a paycheck without going to engineering school

In the beginning, web design was more a matter of programming than of art. If you couldn't code fluently in HTML, you couldn't get the web to do much of anything. Now of course the job market is a lot more wide open.

I'm not going to devote a lot of space to the technical end (low-level programmers, hardware experts and the like). Do a search on "Internet jobs" and you'll get tons of advice about how to start careers, not to mention a ton of job hunt sites clamoring to help you find employment once you've got the necessary training.

Instead, let's take a look at the web-based careers that more closely resemble traditional media jobs. If you're doing the kind of work that other media do, you can expect the job requirements to be pretty much the same. So if you go to work for a magazine's web site (or an unaffiliated web site that does the kind of stories magazines typically tackle), you'll need to have the same set of skills and talents as any other magazine writer, photographer, artist or editor.

In addition, media web sites need web designers with media skills. For this kind of job you'll need to be about to create pages, which will require you to be able to use web design software, probably do a little HTML coding as well, and work with whatever CMS your employer uses. You'll also increase your value in the job market by

sharpening your skills with multiple media. If you can get web text, video on demand and podcasts to all work together to tell a story, employers should love you to pieces.

DIY

From rags to riches

The World Wide Web also presents several opportunities for you to be your own boss. We've already discussed the importance of income from advertising, which is easy to get going but won't provide quit-your-day-job money unless and until your site builds a significant following.

Don't forget that even if you don't want to start your own web site, you can freelance for other people.

The "sell something" option might seem daunting at first, but give it a second look. Run "eBay success stories" through a search engine and you'll get no end of tales of people who've used the popular web "auction" service to turn piles of trash into stacks of money. Many artists also market their creations – just about anything from ceramics to T-shirts – on stand-alone sites or via web marketplaces such as etsy.com.

Some folks even make money on the web the way "flippers" profit in the real estate market. They buy potentially popular domain names from owners who are doing a bad job (or no job at all) of maintaining them, fix them up (improve the layout, add features and so on), and then sell them for a profit to companies that could put them to good use.

The 8sails story

In connection with our consideration of making money online, let me suggest a radical concept: it isn't necessarily necessary to make money.

Just about every other mass medium requires a lot of money to get started. Radio and TV stations are priced well into the millions. The cheapest of movie productions still costs more than a good used car. Even the cheapest of magazines still requires a printing budget, not to mention a great deal of time and effort.

The web, on the other hand, costs little or nothing. With just a cheap computer and an Internet connection, you can set up a blog or even a whole web site. Your presence will be just as accessible to millions of potential readers as every other spot on the web.

So why worry about turning a profit? Money's nice, no doubt about it. But it also comes with obligations. If you start trying to cater to audiences in order to increase your page views and up your ad revenue, you run the risk of generating what you think people will want rather than what you want to do. Sure, in the real world you have to bow to pressure in order to pay the bills. But if you've got a job that pays the bills anyway, online media work is cheap and easy enough to do on the side for the sheer pleasure of doing it.

Consider 8sails.com. Maintaining the site is cheap enough (around \$100 per year) that I don't have to concern myself with whether or not it makes any money. And the blogs I

write for are even cheaper (i.e. completely free) to set up and maintain. I suppose I could “monetize” the site – put ads on all the pages – but then I’d have to devote a lot of effort to marketing and drawing in more readers. As it is, I can spend my time writing movie reviews, creating blog entries and working on special projects such as the Survival Guide.

Besides, as a reader would you prefer the site as it is or would you rather have each page “decorated” with ads for weight loss pills and dating sites?

Ethics

Personal morality and the profession

Fanning the flames

Take a medium that has the potential to reach millions of people, make it interactive so users can send messages as well as receive them, and eventually you’re going to unearth the dreaded substratum of jerks. If you’ve spent any time online, you’ve probably already run across at least a few people who seem to have nothing better to do than sit at their computers day and night dishing out insults about everybody and everything.

Such users are commonly known by insulting terms such as “trolls” and “flamers.” Though one expects extremists to crop up in discussions of controversial topics such as abortion, “flame wars” can also erupt over such seemingly innocent topics as tipping in restaurants or eating a vegan diet.

Naturally flamers are a real nuisance in social media, so we’ll encounter them again in the next chapter. But they creep in where they aren’t encouraged as well. “Comments” sections are particularly vulnerable. In general inviting reader feedback is a valuable tool that helps make web communication better. But when a flamer steps in, he can ruin the experience for everyone.

Psychologists have more than one explanation for what motivates such people. Unfortunately, they can be hard to deal with. Unless they make threats or otherwise violate the law, they’re pretty much free to lurk the net looking for opportunities. Unless the site’s webmaster deletes what they write, they just have to be endured.

Law

The First Amendment and free speech

Protecting the children

By the mid 1990s Internet usage had gotten big enough that even Congress noticed it. The web was a new way to communicate, so the government’s authority – or lack of

same – to regulate its content was untested. So in 1996 the House and Senate passed the Communications Decency Act, and President Bill Clinton signed it into law.

Like many “protect the children” measures, the law went well beyond anything designed to safeguard kids. The regulation made it a crime to use the Internet to publish obscene or indecent material “in a manner available to a person under 18 years of age.” As underage users could of course access anything anyone else could see on the web, the law effectively banned indecency on the Internet, a restriction that could have included everything from soft-core porn to harsh language.

Opponents of the law immediately sued the government, asserting that it violated the First Amendment’s protection for free speech. The Supreme Court agreed, striking down the law as a violation of the Constitution.

Congress went back to the drawing board, and in 1998 they passed the Child Online Protection Act. Though the new law was limited only to “commercial distributors of material harmful to minors,” the definition was again so broad that it would have significantly restricted speech on the web. Though it bounced around the courts for awhile longer than the CDA, eventually it too was declared unconstitutional.

For round three, Congress focused in on schools and libraries receiving funding assistance from the federal E-Rate program to install filters on their computers blocking sites with indecent content. This restriction wasn’t a ban on the Internet as a whole. Rather, it was a condition placed on federal dollars; if libraries didn’t want to install filters, they didn’t have to take the government’s money.

This time the Supreme Court found the law constitutional, provided that adult users could have the filters turned off.

Lawsuits and the courts

Section 230

Anyone who’s been to law school will tell you that often the question “can you sue?” is nowhere near as important as “whom can you sue?” The Internet provides perfect examples.

Say a college student has a blog on Blogger. He gets mad at one of his professors, so he gets on his blog and falsely accuses her of stealing money from the college. This defamation could give the professor the right to sue the student for libel. But being an average college student, the guy doesn’t have much money, which makes it hard to interest a lawyer in taking the case.

But what if the professor could sue not just the student but also the company that hosts his blog? Blogger is owned by Google, a multi-billion-dollar company with deep pockets that any lawyer in America would love to stick a hand into.

Prior to 1996, the question was very much up in the air. But the Communications Decency Act contained a provision – section 230 – that protected service providers from

lawsuits based on content they didn't create themselves. When the Supreme Court declared the bulk of the CDA unconstitutional, it left section 230 in place.

So now companies that merely host content created by users can't be successfully sued if that content defames or otherwise injures someone.

Social Media

Blurring lines

This is one of the shorter chapters in the Survival Guide. At least in part the lack of length is due to the lack of history. Unlike books, movies and the other older topics, social media hasn't been around all that long. "Journey back with me now to the thrilling days of 2006" doesn't make much of a start to a story.

Further, this new medium isn't as well established as the rest. At this point in media history we have a pretty good idea who the major players are, where they came from and how they work. Even with media in transition (such as recordings and newspapers), their origins help us understand what's going on with them now.

We're still in the "origins" phase of social media's development. Though I can make reasonably reliable guesses about the success or failure of some sites, many more stand an equal chance of thriving or dying. So if you follow the Survival Guide on a long-term basis, you're likely to see this chapter change a bit in the coming years.

But please don't mistake shortness of text for lack of importance. In some ways social media are the most important topic in the book. They blur the lines between mass communication and interpersonal communication. And that's not just textbook trivia. This blurring of distinctions may have a major impact not only on social media sites themselves but also on the media industry as a whole.

History

Key moments

Bulletin boards

Social media technically goes all the way back to the days before the Internet (or at least before the Internet became a mass communication medium). In the late 1970s, computers connected to one another using **dial-up modems**. These devices differed from modern phone-line-based connections in that the "conversation" between the computers was audible (and would tie up the phone line while you used it), it was much slower, and it connected you to only one other computer at a time.

For many home computer users, Bulletin Board Systems were popular modem partners. BBSes were specialized computers designed to work like traditional, dead-tree bulletin boards. Users dialed up the BBS's phone number, connected, posted information and read what others posted.

BBS systems fulfilled many of the needs that web-based social media cater to today. On a local scale, churches and community groups set up BBSes so members could read up-to-

date information and send messages to each other. In places where people were more spread out – such as the Australian outback – users living in remote spots could connect with one another and form BBS communities.

Groups with specialized interests also set up BBS systems, allowing people with diverse interests to communicate. Some even hosted Multi-User Dungeons, early forerunners of multiplayer games such as *World of Warcraft*.

Of course the Internet rendered BBSes obsolete by connecting thousands – and later millions – of computers all at once.

Usenet

The Internet simplified and sped up connections between computers, providing the hardware backbone to allow every machine on the network to connect to every other machine. Although faster, better communication was now possible, the Internet lacked centralized “bulletin boards” where people could connect with one another.

Enter Usenet. First developed at Duke University in 1980, Usenet was a system of newsgroups resembling a bulletin board. Users connected to the server (later a series of servers) and located groups dedicated to their interests. Usenet was divided into hierarchies (such as **sci** for science, **rec** for recreation and so on). Larger sections were divided into subsections, such as **rec.sports** and then divided further, becoming more and more specialized “newsgroups” (**rec.sports.baseball.kcroyals**).

Some groups were moderated, which meant that postings from users had to be approved by someone in control of the group before they would appear on the server. Others were unmoderated, allowing everyone to post whatever they wanted (and you can imagine how well that worked in some discussion areas).

Many regular users thought the system took a fatal turn for the worse in September 1993 when AOL made it part of the company’s service, introducing a flood of “newbies” into the newsgroup world. Usenet served as an excellent bridge between older BBS technology and full-fledged web-based social media.

Geocities

Everybody wants her or his own web site. We can all think of something we can use the web for, whether it’s publishing a major metropolitan daily newspaper, distributing information about the mass media in “survival guide” form or just sharing photos of the kids.

Creating a web page isn’t the world’s most difficult task (if I can do it, anyone can do it). Even back in the day when page creation required HTML coding, it still wasn’t a prohibitively difficult task. However, “web presence” became an option for literally everyone starting in the mid 1990s thanks to Beverly Hills Internet.

BHI established a web site called GeoCities. Anyone who wished to could set up a page on the site free of charge. Pages were organized into “neighborhoods” according to

interest (Wall Street was for financial pages, Hollywood was for entertainment interests, and so on). Individuals who set up pages were called “homesteaders,” almost as if they were setting up actual, physical addresses in real cities.

The site proved immensely popular. By 1997, just two years after it was founded, GeoCities became the fifth most popular site on the web and added its millionth homesteader.

Sadly, just two years later Yahoo! purchased the site was purchased and shut it down. The closure occurred so rapidly that many GeoCities users didn’t get the chance to move their content to other locations on the web. Despite efforts to archive the neighborhoods, many pages disappeared forever.

Key players

Facebook

Facebook is the current social media champion. The site has more than 800 million active users. If the site was a country, it would be the third most populous place in the world.

After getting off to a rocky start (hacking into college computers to get student ID photos for a Hot-or-Not-ish site), Mark Zuckerberg started thefacebook.com, a social media site that at first was limited only to his fellow Harvard students. But it swiftly proved so popular (half the university’s undergrads signed up in less than a month) that Zuckerberg and his partners decided to expand, first to other Ivy League schools (plus Stanford), then to other universities, then to high schools, then to everyone over the age of 13 with a valid email address.

Twitter

Social media doesn’t get much simpler than this. Twitter users communicate with their “followers” via brief (no more than 140 characters) messages called “tweets.”

The original plan for the website was a podcasting platform called Odeo. But when Apple announced that it was setting up its own podcasting service within iTunes (and thus automatically set up on all iPods, computers and other Apple products), Odeo decided to change direction.

To start, Twitter was supposed to be a “status update” system. Tweets were short because they were designed just to communicate what you happened to be up to at the moment: “in class,” “on my way to the store,” “making people mad in a movie theater” and so on.

But sometimes technology has a mind of its own. Users swiftly started using Twitter to share random thoughts, links, information that might be of interest to someone besides friends, family and stalkers.

Celebrity tweeters helped quite a bit. Several singers and other media personalities each reach millions of followers every time they tweet.

YouTube

Here's a rarity in the world of social media: a site that does exactly what it was originally designed to do. From its origins in 2005, YouTube was set up to be exactly what it is: a massive online collection of user-posted videos.

In less than a year the company went from a small office in a garage to a \$1.65 billion buyout by Google. After all, what's not to love? An audience of millions can watch videos for free. Users can make their videos available to an audience of millions. And the web site rakes in ad revenue without paying for content.

Of course the plan isn't flawless. Videos require more computer memory than text files or still images. And of course some users post copyrighted content they don't own, which has to be removed when it's reported.

Still, in an average 65 days YouTube users add more hours of content than the four major broadcast networks have created in the last 65 years. It isn't all footage of a kid biting his older brother's finger, either. Many professional video producers distribute their products via YouTube hoping to either earn money from them directly or using them to build a market for another product (such as a singer's music videos helping sell new tracks).

Role in society

Astroturf

Democracy forces politicians to at least pretend to care about what voters think. In the pre-Internet world, public opinion could be hard to assess. Mail from angry constituents were often a better gauge of what extremists thought than what the majority believed, and polls weren't always much better.

Social media provided a partial answer. Because it allows "ordinary folks" to publish their opinions, sites such as Facebook allow direct communication between candidates and the public. As most social media sites are free, a politician in the 21st century would have to be crazy not to use them.

To be sure, the system isn't without problems. Not everybody uses social media, so they aren't the perfect way to communicate with the whole world. Elected officials may still get more messages from the extremes on an issue than from the general public, particularly if the issue is of great concern to limited groups and little concern to anyone else.

Further, what may at first seem like a "grass roots" movement can turn out to be "astroturf," an effort by a pressure group or public relations firm to make their message look bigger than it is by using tricks such as creating fake identities.

Technology

How it works (the state of the art)

Blogs

The origins of social media technology are pretty much the same as the tech origins of the rest of the Web. So let's dive right into how they work.

A blog is sort of a diary (literally "weB LOG") that anyone can read. They require almost no technical skill at all to establish or maintain, so anyone with an Internet connection can be a blogger. Further, you can blog about anything you wish. Your blog might be about what you have for dinner every night, how much you love (or hate) romantic comedies, literally anything you can think of.

Software such as Blogger make it easy to generate entries, upload photos, audio, video, links and other material. You can even "monetize" by allowing the host site to run ads on your pages, though of course getting paid depends on your blog's ability to attract readers.

Thus the main question you need to ask yourself before starting a blog is "what do I want to do with it?" If you just want to swap stories with a handful of friends, your chances of success are pretty much 100%. On the other hand, if you're trying to get a blog to pay enough that you can quit your day job, you're going to have to come up with something that people want to read about and can't get from the millions of other blogs out there.

Youtube

Video is trickier than words. Anyone who can type an email message can blog or tweet, but creating a "moving picture" – even a 30-second clip – requires a bit more technical know-how.

If your ambition is no greater than a few seconds of your dog catching a Frisbee, all you need is a smart phone with video capability and a YouTube account. Use your phone to record Rover making that perfect midair catch, select the "upload to YouTube" option, and your aerobic pet has the same potential audience as the latest Taylor Swift video.

Please note that I said "potential." Obviously celebrities have huge promotion staffs and budgets at their command, which you probably don't. On the other hand, you can increase your video's chance of getting noticed by giving it a descriptive title and selecting keywords that viewers might use to search for stuff like yours.

The next step beyond dog-and-a-cell-phone videos is to shoot more than one clip and edit them together into something more elaborate. This requires editing software. You can do some basic functions (such as rotating or changing to black and white) within YouTube. But sequencing clips into sequences the way the pros do requires stand-alone software. I used to be a big fan of iMovie back when it was simple and came free with the purchase of a Mac. But with its typical concern for customers' needs, Apple changed the way the program worked and started charging extra for it.

Facebook

Facebook can be as simple or as complicated as you want it to be. You can spend five minutes a day touching bases with your friends or waste hours playing a selection of hundreds of games.

When you establish a presence on Facebook, the system sets you up with a “wall.” This is a space where you can post your thoughts, share links and so on. Anyone you “like” (they’ve accepted your friend request or vice versa) can see what you post. You can also share information about yourself (where you work, where you went to high school and so on) via your profile.

The more you share, the more “clues” you give the Facebook system about how to connect you to other users. After I entered my high school and year of graduation, I was swamped by recommendations from Facebook about other users I might want to “friend.”

The system provides several advantages over email, not the least of which is that you can send information out to a lot of people at once without worrying about address list maintenance or spam filters. On the receiving end, you can “unfriend” someone who’s getting on your nerves or simply “hide” them so you don’t see their posts anymore. I’ve found that particularly helpful with folks who do a dozen posts a day about the progress they’re making in their online games.

Facebook is also something of a microcosm of the web as a whole. Just about every interest you can imagine has a Facebook page devoted to it. Some of them are frivolous, such as “can this dog with a tinfoil hat get more Facebook friends than Glenn Beck?” Others seriously appeal to a limited audience. I’ve found Facebook pages for just about everything from my favorite fried chicken restaurant to a Japanese TV show I watched when I was a kid.

Twitter

Twitter couldn’t be easier to use. Sign up. Tweet. That’s about all there is to it.

Of course you’ll want to follow other people’s tweets and/or allow them to follow yours, a process that works a lot like Facebook friending. And you can upload content such as pictures and links. Just watch that 140-character limit!

Industry

How the industry makes money

Social media site profits

The standard business model for social media sites is based on advertising. People use the sites for free, but the pages they look at include ads that supply the sites with revenue.

Thus the more people use the site, the more pages on the site get viewed. The more pages that get viewed, the more ads get seen. And the more ads that get seen, the more ads get paid for.

However, there's economic value to social media even beyond advertising. By signing on and communicating with friends, users provide social media sites with millions of pieces of information about who's talking about what. Databases of such consumer information have tremendous potential value to marketers.

So even if a site doesn't make money by making you look at ads, your online activity can still help them pay the bills.

Social media marketing

As social media increases in popularity and other media lose audiences, marketing pros are paying more and more attention to the potential of sites such as Facebook to get persuasive messages to potential customers.

These 21st century promotional techniques aren't as simple or as straightforward as their 20th century ancestors. If you watch a TV show, the ads are buried right in the middle of it and can be difficult to avoid. Likewise when you're reading a magazine, the ads might be fairly easy to ignore but they're nearly impossible to avoid.

Not so on social media. Ads on the sides notwithstanding, people look at only what they want to see. The trick, then, is to go beyond what you want people to read about your product and give them something they actually care about. It isn't enough to set up WidgetCo with a Facebook page and hope people check it out. The company needs a gimmick, something like "WidgetCo Presents This Day in History." If people come to you for something they actually want to read, they'll associate it with your company.

Careers

In the corporate world

Working for the big guys

Getting a job at one of the major social media sites is a lot like getting a job anywhere else. They need customer support people, accountants, receptionists and janitors the same

as every other good-sized company in the universe. These sites' "stock in trade" is content provided free of charge by users, not content they generate themselves. So they don't tend to need "media professionals" to come up with content for them.

On the other hand, there's more potential in coming up with your own content and then using social media to reach your audience.

DIY

Bloggng for dollars

As a general rule, the site that hosts your blog isn't going to pay you for writing it. But that doesn't mean you can't use a blog to make money. Consider the following four possibilities (and please note that there are other opportunities not listed here):

First, you can **advertise**. On Blogspot, allowing Google AdSense to stick ads on the sides of your postings is as simple as clicking the "monetize" button and answering a handful of questions about where you want the money to go. Of course the catch is that ads pay based on either page views (how many unique visitors look at your pages) or click-throughs (how many users click on the ads). A popular blog can make some serious cash. But if you only have a handful of readers, best to stick with your day job.

Second, you can use your blog to help you **promote something else**. If you sew in your spare time, consider mentioning your abilities and your reasonable rates in a blog. Some writers have found success using their blogs to help sell their books.

Third, **promote yourself**. If you're an expert on something, you can use a blog to impress people with your knowledge. Then maybe if they need someone with your expertise, they'll know whom to call.

Finally, some bloggers make money by basically accepting **bribes** to mention products in their blogs. This was popular for awhile with "mommybloggers," writers specializing in the interests of new parents. Some of these folks struck deals with the manufacturers of diapers, baby powder and the like to trade favorable mention in the blog for a little cold, hard cash.

Like advertising, you'll need a good-sized number of readers to pull this off. And you also have to worry at least a little about what might happen to your credibility if your readers find out that you recommended a particular brand of baby food not because it was nutritious or delicious but because you were paid to.

YouTube

YouTube is one of the rare exceptions to the general rule that nobody is going to pay you to play around with social media.

First the bad news: you have to come up with a popular video first. Something you upload must either accumulate a lot of viewers all at once or amass a following over time.

But once the site records enough views for your work, YouTube may ask you to “partner.” That puts your channel on a paying basis.

More bad news: in exchange for money, the site puts ads in your videos. Usually this takes the form of either a pre-roll (an ad that has to be watched at least in part before your video starts) or a pop-up that appears over your video.

More bad news: it won’t pay much unless you get a lot of viewers. The average amount YouTube pays is \$2 per 1000 views.

On the other hand, good news: money. Hey, even \$2 is better than nothing. Further, some folks lure in enough viewers to make a serious living at it. Professional-level income usually requires a professional-level commitment of time and expertise. But sometimes an amateur production can hit it big. The “Charlie bit my finger” video – the most popular non-pro video in YouTube history – has drawn nearly 370 million times. That’s more than \$700,000 for a parent with a camcorder and a kid who likes to bite his brother.

Ethics

Personal morality and the profession

Mongolian beef robots

Back in the 20th century, reaching an audience of millions (or even high thousands) was an expensive proposition. Before TV stations hired on-air people to speak to a TV-sized audience, they made sure that their potential hires actually knew what they were doing. Even relatively small newspapers offered jobs only to writers with some training and practice.

In 21st century social media, anyone who wants to can publish material that may potentially reach a lot of readers. The thoughts of someone who can barely form complete sentences are just as accessible as the work of seasoned pros. Though this creates some exciting possibilities, it also poses some big problems.

One of the big ones is a little thing called autocorrect. Based on the observation that many writers aren’t the best at spelling and grammar, some software is designed to make fixes for us as we type. This tends to be useful when it simply flags words it doesn’t recognize, an approach that doesn’t eliminate errors but at least helps cut down on them a bit.

Trouble can arise, however, when the software makes changes with little notice to the writer. To be sure, autocorrection can prove useful even with minimal consent. It can also make a royal mess of what you write.

An example from my personal experience: one afternoon I was typing an email to my wife about what we were planning to have for dinner. I offered to cook some Mongolian beef, but I failed to notice that autocorrect added the word “robots” to the end of the sentence. This wasn’t the biggest communication calamity in human history. My

meaning was still reasonably clear, and it was just a note to my wife. But a quick search of the Internet will uncover dozens of sites that specialize in listing far more serious mistakes.

Thus one of the first lessons learned by users new to social media is that sometimes the worst mistakes are the ones you don't even make yourself.

“On the Internet nobody knows you're a dog”

Just about everyone (including me) who writes about social media eventually makes a point about the millions and millions of users. Truth be told, however, nobody really knows how many millions of people are using the sites because nobody knows for sure how many of the millions of users are real people.

To be more precise, many users (nobody really knows exactly how many) use more than one identity. Some even pretend to be someone they're not, a problem that hits celebrities especially hard.

Fake identities – sometimes known as “sock puppets” – can take several forms, not all of them malicious. One of my friends maintains two different Facebook profiles, one under her real name (making it easy for classmates from high school and other casual acquaintances to find her) and one under a pseudonym (which she uses to communicate only with close friends). Sometimes a fake identity is just for fun, as with a friend of mine who set up a profile for an imaginary rabbit.

On the other hand, false identity can be a more sinister business. In early 2011 two high school students were arrested and charged with multiple felonies for creating a fake Facebook profile in the name of a classmate and posting photos with their victim's face edited onto another girl's nude body.

Whether for good or ill, social media sites don't like fake profiles. They make actual usage harder to track, which in turn makes advertisers less willing to pay for ads. Thus most social media sign-ups require you to promise that you only have one profile on the site. Facebook eventually caught up with my friend with an “acquaintances” profile and an “actual friends” profile and told her she had to get rid of one or the other.

Philosophy and the real world

Privacy protection

Let's start with something that should be more obvious than it is: there's no such thing as privacy online. If you publish something on the Internet, everyone can see it. Your name. Your email address. Your actual address. Pictures of your kids. Pictures of yourself getting drunk with friends. Pictures of yourself with your clothes off. You post it and it isn't private anymore.

So the trick lies in knowing what you're publishing and what you aren't. You can begin to safeguard your privacy by not posting information you don't want people to know. For the most part, if you don't put it up then it can't leak out. I say "for the most part" because your social media devices may be "telling" on you without your knowledge. For example, some cell phones and tablets will automatically include your location with your messages unless you tell them not to.

Further, hackers occasionally find ways into even highly secure systems. So even information that should be private – such as credit card numbers provided only on secure ordering systems – can end up "leaking." But try not to get too spooked about this sort of thing. Your credit card is as vulnerable with a server in a restaurant as it is online (something to think about the next time you're considering being rude to someone in a restaurant).

Privacy is easier to control on some sites than on others. Facebook is particularly notorious for having complicated privacy settings that can make it hard to tell who can see what.

So once again, the overall rule is "don't put it online if you don't want everyone to see it." And if you're going to risk it, be sure you proceed with caution.

Law

Lawsuits and the courts

Posting your way to the unemployment line

Celebrities seem to be eternally in danger of getting fired because of their big mouths. Because actors, singers and the like live in a constant bubble of attention, an angry word outside a nightclub, a slip of the lip on a talk show or even a simple traffic stop can turn into a career-damaging debacle.

Most of us have the luxury of living outside the realms of such constant attention. Except in one place: social media sites. Here ordinary people are at a particular disadvantage. Rich celebs can hire PR flacks to help keep them from saying something stupid, but the only people who look out for the rest of us online are ourselves.

As a result, a growing number of sad folks have discovered that in many cases employers have the right to fire you even for your after-work conduct if something they don't like shows up in your social media usage.

Sometimes the problem is something obvious, such as the legendary case of the woman who posted a message on Facebook complaining about her job and calling her boss a "pervvy wanker" (forgetting both that she had two weeks to go on her six-month probationary period and that her boss was one of her Facebook friends). And some companies have no sense of humor at all, firing people for tweeting minor gripes.

In other cases it's something that seems less like an official company concern, such as "party photos" or even anonymous material about promiscuous sex.

Most employees know that their employers can monitor their on-the-job computer usage. But some bosses routinely do searches of popular social media sites looking for any mention of the company.

Copyright and YouTube

Throughout most of the social media world, copyright isn't a big problem. If you write something, you own it. The same goes for photos you shoot. Links to other people's web sites are likewise not a problem.

However, problems arise when you start posting things you didn't personally create. You're unlikely to tweet anything you didn't come up with yourself. But in the realm of video creation, sometimes "borrowing" from other people's work proves more tempting than it should.

Some violations are obvious, others less so. If you digitize an entire music video by your favorite artist and upload it without permission, you've violated the law. Uploading just part of another work – such as a single scene from a movie – can still break copyright law. You're also breaking the law if you use someone else's work in your own without permission, such as if you make your own music video using someone else's copyrighted song.

The rules governing copyright are complicated. If you want a simple rule to follow, when in doubt leave it out.

By its nature, YouTube faces the biggest problem with copyright violators. The site has a system in place to deal with violations, removing the offending video and sending the poster to "copyright school." Serious and repeat offenders can be banned from the site.

Gaming

Pure fun(?)

For the longest time, videogames were considered at best a small corner of the mass media realm. Even today, many standard Intro to Mass Media textbooks consider gaming only in passing, usually as part of the chapter on the Web.

That's unfair, because the videogame industry brings in billions of dollars every year. A popular game can turn profits as big as popular movies and far, far bigger than the average book. And as we'll see, games are an important part of big media companies' marketing mix.

Sure, they're mostly about entertainment. But so are movies. So is music. So are a lot of television shows.

So welcome to full-fledged mass medium status, videogames. You've earned it.

History

Key moments

Boop. Boop. Boop. Boop.

Though it wasn't technically the first videogame ever, Pong was the first game to make it big both in arcades and in homes.

By 21st century standards, Pong sucks. It's basically a slow-moving, two-dimensional version of Ping Pong. If you're playing against the computer rather than an actual opponent, the machine doesn't miss unless the difficulty level is set so low that it deliberately lets you score. Thus either it beats you every time or you beat it only because it's programmed to lose.

Things improved a bit when game designers started producing variations on the theme, such as Hockey (more than one paddle and a smaller goal area) or Breakout (the ball destroys bricks in a wall). But it still wouldn't exactly pose much of a threat to the latest installment in Halo or Grand Theft Auto.

In 1972, however, it was innovative stuff. Allan Alcorn, an engineer for a small startup called Atari, designed Pong as a practice exercise. The company saw marketing potential in the game, which made several key improvements (such as bounce angle) on previous "table tennis" computer games. It was a modest success in the arcade and bar markets. And after Atari struck an exclusive deal with the Sears retail chain, Pong struck it big in the home market.

The age of videogames was born.

You are eaten by a grue.

For the first three decades of their existence, computers had no graphics. At first they didn't even have screens (printing information on paper) or keyboards (getting input from punch cards). Even when they did start using monitors, they could only display the crudest of pictures made up of alphanumeric characters, sort of like big, elaborate text emoticons. And of course animation was a complete impossibility.

But that doesn't mean there weren't any computer games. Text-only computers were ideal for text-only games, also known as **interactive fiction**. The game begins by describing your location, and you type in commands. For example, the game Adventure started something like this:

Computer: You are standing at the end of a road before a small brick building. Around you is a forest. A small stream flows out of the building and down a gully.

You: Enter building

Computer: You are inside a building, a well house for a large spring.

Adventure – also known as Colossal Cave – was the first text game, written in FORTRAN (no easy feat, as FORTRAN isn't the easiest language in the world to work with) by defense programmer Will Crowther and later improved by Stanford grad student Don Woods. Like many “experimental” programs, it was open source and distributed for free.

In 1979 a group of programmers from MIT founded Infocom, the first successful company specializing in text games. The company's first offering, Zork, was a lot like Adventure. It too involved exploration of a large, complicated cave populated by trolls, dragons and vicious little monsters known as grues. But Infocom's parser – the software that interpreted commands typed in by players, could understand sophisticated commands such as “pick up the red book and put it in the bag” rather than simple, two-word entries such as “get book.”

The company eventually expanded its offerings to dozens of games, including a version of *The Hitchhiker's Guide to the Galaxy* co-written by Douglas Adams, the author of the novel. Marketed as an alternative to mindless arcade blasters, Infocom games stressed imagination as the ultimate graphics system. The strategy worked well into the 1980s, when the company was bought up and eventually closed down by Activision.

Even in today's nextgen-graphics-intensive market, interactive fiction remains popular with niche markets.

The big crash of '83

The videogame industry got off to a rocky start. In 1977 it experienced an industry-wide “crash,” basically because there were so many different versions of Pong in the market that no one company was making money selling theirs. Game manufacturers dumped

their products at bargain basement prices, which of course made the whole business unprofitable for awhile. When the dust settled, only Atari and Magnavox remained.

Then in 1983 the industry crashed again. Once more part of the problem was over-saturation. Atari dominated the market and assumed that it could therefore sell consoles at a loss and make up for it with game cartridge sales. That left the company vulnerable to any glitches in the market. Atari underpaid its designers. And the games, well, I don't want to say straight out that they sucked, but they certainly didn't measure up to their counterparts in arcades. The home version of Pac Man proved to be especially disappointing.

But then along came *E.T.* Steven Spielberg's movie was a mega-hit at the box office (it made back its production budget in its opening weekend and still holds the number six spot on the list of top-grossing movies in the domestic market). Seeing the potential for a profitable tie-in, Atari paid \$25 million for the right to turn the lovable alien's story into a videogame.

Then the company gave designer Howard Scott Warshaw only five weeks to create the game (typical production cycles at the time were closer to six months) so it could be on shelves in time for Christmas. Predictably enough, it was a colossal failure. Initially it sold well, but of the 4 million copies produced, 3.5 million were returned to the company. Atari eventually bought space in a New Mexico landfill and buried the whole mess.

In a more robust game industry, this would have been an unfortunate glitch. But with the novelty of home gaming wearing off and Atari's multi-million-dollar profits turning to multi-million-dollar losses, *E.T.* was the final nail in the coffin. The gaming business in the United States was out of business until the Nintendo Entertainment System, already a big hit in Japan, successfully crossed the Pacific two years later.

Going mobile

The marketing potential was obvious. Prior to the age of the cell phone, people on the go frequently found themselves on subways, in waiting rooms or between classes with nothing but time on their hands. If videogames could somehow be made portable, the demand would be huge.

The challenge was to create something that people would actually want to play. When gaming was new, hand-helds tended to be pricey and play only one game each. Further, graphics were often limited to small grids of lights, requiring a lot of imagination to get "football" or "alien attack" out of them. Such games were popular, but not huge like console games.

Nintendo changed the market in 1989 with the Game Boy, the first commercially-successful portable game unit with interchangeable cartridges. The original Game Boy came packaged with Tetris, but players could buy an ever-expanding set of other games and swap them out, just as home systems had done for years. Later improvements included more compact cases and color screens.

The Game Boy remained Nintendo's handheld platform until 2004, when it was replaced with the dual-screen DS. That same year Sony came out with the PlayStation Portable, the first time Nintendo faced serious competition from another system.

Key players

The hungriest man in show business

Like Pong, there isn't much to Pac-Man. The player guides a yellow circle with a mouth around a maze, trying to eat all the dots without being captured by ghosts. Eat a power-up, and the ghosts become the prey for a few seconds.

However, the little yellow guy blazed trails both in and outside his maze. The game was the first to include power-ups, and the use of non-violent "stealth" rather than the random blasting of games such as *Space Invaders* helped popularize it with women, younger players and parents.

But beyond the videogame world, Pac-Man was a genuine cultural phenomenon. Popularity with people who normally didn't play games made him the first videogame "character" to be instantly recognizable as the unofficial mascot of the new tide of gaming popularity that was eating so many quarters in arcades that the United States briefly experienced a quarter shortage. He inspired many licensed products, including the top-ten title track from "Pac-Man Fever," a concept album inspired by the game.

Plumber power

Originally he didn't even have a name, just another anonymous videogame guy trying to save a princess from a giant barrel-flinging ape. But by his next game appearance, he'd acquired a name (Mario), a profession (plumber), a brother (Luigi) and a following.

Mario followed in Pac-Man's footsteps (if Pac-Man had feet, that is). He's appeared in several games over the years, from the original side-scrolling platform hoppers to more elaborate 3D race games.

However, Mario had a couple of advantages over his pizza-shaped competitor. For starters, he was a person rather than a puck, which made him easier to license for things such as a live-action movie. And unlike Pac-Man, which Namco marketed to game systems from several manufacturers, Nintendo kept strict control over the Mario franchise. If players wanted Mario, they could only get him from one company.

Further, gamers everywhere owe a debt of gratitude to the plucky little plumber. In the wake of the Videogame Crash of 1983, Mario's success in Japan crossed the Pacific and helped revive the U.S. game market.

Lair of the Dragon

Game graphics in the early 1980s were a big improvement over the blocky pixels of Pong. But nobody would mistake the flat mazes of Pac-Man or the spidery vectors of Asteroids for the image quality of even the cheapest cartoons.

In 1983 a Hollywood producer made the first move to change the way videogames approached visual content. Veteran Disney animator Don Bluth came up with the idea to create an arcade game that used a laserdisc (a larger forerunner of DVDs) rather than computer-generated graphics. The result – Dragon’s Lair – was a combination of interactive fiction and animation.

The player guides Dirk the Daring through a series of animated sequences using a joystick to guide the character’s actions. Making the right move at the right time guided the animation to the next sequence. A wrong turn resulted in gruesome animated death.

Because the game showed animated clips rather than using computer-generated graphics, game play was limited. Learning the right moves from the wrong ones could cost a few quarters, but once the player had the pattern down the game wasn’t particularly challenging.

On the other hand, the adventures of Dirk the Daring proved that there was a demand for games that went beyond simple pixel graphics, paving the way for visuals that looked more and more like the real world (or at least the movie version thereof).

Stealin’ artifacts and lookin’ good doing it

By the mid 1990s game graphics were sophisticated enough to at least vaguely simulate a three-dimensional, real-world environment. But this new generation of games lacked an iconic character, a Pac-Man or Mario that people could instantly recognize.

Enter Lara Croft. She made her debut as the protagonist of the first game in the Tomb Raider series in 1996. Eidos Interactive took a risk by releasing a game with a female player character, but Croft was designed to appeal to men as a physically-attractive woman and to women as independent and intelligent. In a market full of games in which women often played roles no more significant than being kidnapped by giant apes and lying around until rescued by plumbers, Croft was an innovation.

She also became the world’s first imaginary sex symbol. She appeared on the covers of several celebrity magazines, her status as a cultural icon helping to sell games and popularize licensed products such as the *Tomb Raider* movies. Her status has caused controversy, as many critics argue that her physical “attributes” overshadow her potential as a positive female role model.

A universe of alter-egos

The Sims began life as tiny dots in the large, player-created cities of SimCity. The original game and its sequels appealed to wannabe urban planners, but for a big hit Maxis (and later Electronic Arts) needed to get closer to “street level.”

In The Sims, players play people with at least some connection to the real world. Alien invasions and other excuses for mass carnage are few and far between. Instead, the game simulates life in the suburbs. Players buy homes, clean house (or not), fix and eat dinner, go to the bathroom, just about anything real people do. Other characters in the game can be generated by the game or controlled by other players via the Internet.

Expansion packs allow players to expand their options, get pets, go out on dates, even perform magic. The game also has two sequels and a Medieval spin-off.

The Sims appeals to a new audience: casual players. Its “ordinary life” environment is accessible to people who weren’t interested in running through dungeons killing everything that moves. The Sim strategy has even crossed over into social media with combination game and networking sites such as Second Life.

Madden mania

For the longest time videogames and professional sports simply didn’t mix. In the early days the limits of game design caused major problems. Trying to get little pixel lumps to move around a screen was nowhere near as good as watching an actual football game.

Even when graphics started to improve in the mid 1980s, sports games lagged behind their counterparts in the shooter and platform-hopper realms. They tended to be elaborate, imaginary roto league exercises in team management with game simulation tacked on as an afterthought. The result was neither like watching nor playing in an actual game.

Electronics Arts Sports ushered in a new sports gameplay with John Madden Football, a franchise of games first released in 1988. A former NFL coach and current broadcast commentator, Madden insisted that he wanted EA’s game with his name on it to be as realistic as possible.

Though the development process began in 1984, the first version of John Madden Football didn’t hit shelves until four years later. Limitations on home computing power initially made it impossible for the game to play more than five or six players per team, while Madden’s insistence on realism required the full 11.

Over the years the realism steadily improved and game play became more sophisticated. In 2003 the company began the practice of releasing a new version every year, which allowed for up-to-date player rosters as well as additional features such as franchise mode (playing an entire season or even multiple seasons rather than just single games). As soon as audio technology allowed, Madden himself as well as his real-life broadcast booth partners recorded commentary to go with the games, a practice he kept up until his broadcast retirement in 2009.

And of course graphics steadily improved as well. Indeed, in answer to the you-are-part-of-the-game visuals in Madden and other sports games, TV broadcasters have changed their camerawork to include views of the field never before possible.

Wow, those birds are angry

Games are expensive. Small wonder, considering that they tend to require developers to create entire elaborate, three-dimensional worlds full of sounds and images. Actors have to be hired for voice work, which can be pricey if celebrities are required. Programmers and other technicians don't come cheap, either. And on top of everything else, successful games have to do something that other games don't. Thus high prices tend to be the rule rather than the exception.

Exceptions can be found, however, particularly in the world of "Flash games" (named for the software used to generate many of them). These games are simple, typically two-dimensional throwbacks to the early days of gaming. Game play doesn't require hours to master or involve complicated button combinations. Celebrity voiceovers are hard to find. But then so are the large price tags. Many of these games can be found online for free or for small fees (usually less than \$10).

The current champion in this category is Angry Birds, created by the Finnish game company Rovio. Game play is extraordinarily simple: the player uses a slingshot to fling birds at structures full of egg-stealing pigs. It was originally designed for the iPhone, though it was subsequently released for several other mobile devices.

The Birds currently have more than eight million followers on Facebook, and they've inspired many pop culture adaptations from green pig shower shoes to an illegal knock-off theme park in China.

Technology

Origins (the nerd stage and beyond)

Down at the arcade

Many media begin life in public before finding their ways into homes, and videogames are no exception. Indeed, a spot was reserved for them before they even existed.

Starting in the 19th century, penny arcades provided customers with access to a wide variety of coin-operated amusements. Big draws included pinball, automatic fortune tellers and redemption games such as shooting galleries and skee ball. Needless to say, eventually the "penny" part got dropped from the name.

When videogames first hit the consumer market, they required too much hardware for home use. But their cabinets fit in nicely next to the pinball machines in arcades. As game quality improved, they swiftly became the main draws. The age of the video arcade was born. The era lasted from the late 1970s to the mid 1990s, when home game system quality equaled and then surpassed what could be offered in a stand-alone system.

However, cabinets still offer advantages over home systems. Some games require – or are at least more fun with – special equipment such as rifles, punching bags or light-up dance

floors. Stand-alones also continue to flourish in bars and other social settings where video golf and trivia games appeal to people having fun in a group.

The world in a box

Early on, game manufacturers produced home units. Trouble was, at least to start they weren't very good. They played Pong and ... well, they played Pong. Once the novelty of having an "arcade" in the living room wore off, the console got stashed in the closet and forgotten.

But then along came the "second generation" of home gaming consoles, most notably the Atari 2600. Rather than suffer the limits of whatever games were built into the "motherboard," these new boxes accepted cartridges. Thus when you got tired of one game all you had to do was pop the cart out and replace it with something else. It was a considerable savings over buying a whole new system just to change games.

The new technology also introduced a new business model to the gaming industry. Companies frequently sold their consoles for less than the boxes cost to develop and manufacture. Then they'd make up for the loss by taking a percentage of the money paid for all the games created for their systems. Though this "loss leader" scheme hasn't always worked flawlessly (it contributed to the depth of the Crash of 1983), companies still use it today.

The big limitation of early cartridge systems was memory. Atari 2600 carts packed only 2 KB of ROM (by comparison, the entry you're currently reading, if saved as a Word file, would be nearly 40 times that size). Thus games were a bit clunky, often merely slow, unattractive shadows of their relatives in arcades. But by the late 80s technology had improved enough to make home games worth playing, and by the mid 90s they equaled and then passed arcade games in the quality department.

Discs eventually replaced cartridges. And now the up-and-coming model is Internet downloading, which of course allows for file sizes larger than discs can hold. So for the first time since the 1970s the limit on game size, quality and complexity isn't the transfer medium but the console itself.

Games on computers

"Two hundred dollars for a lousy game? Do you think I'm made of money? Why don't you just play Monopoly with your little sister? You can do that for free."

Every kid in the United States has at one time or another fallen victim to the Classic Mother Videogame Block. Even if everyone else in the universe already has the latest and greatest, a box that did nothing but play videogames isn't always at the top of the budget list for a family trying to make ends meet.

A computer, on the other hand, has more than one use. Mom and Dad can buy one for serious grownup stuff, and when they're done the kids can use it to play games. Or let's be honest: grownups can buy computers to do work but end up playing games themselves.

Games have been available on personal computers for as long as there have been personal computers. Indeed, some of the earliest home computers such as the TRS-80 (known affectionately by its users as a Trash-80) were popular among electronics hobbyists specifically because of their ability to play simple videogames.

As PCs gained popularity, PC games surfed the wave. But problems arose due to the non-uniform technology of Windows computers. Many games – especially those with complicated graphics – required specific hardware configurations not present in all PCs. Macintosh hardware was more uniform, but because the Mac market was smaller it was less attractive to game marketers. Many games available for the Mac were “ports” of PC games, which could also cause technical problems.

In the 21st century PC prices have come down far enough that even semi-serious gamers can purchase a machine customized with faster graphics cards and other hardware mods to make game play more enjoyable.

Massively multiplayer

Not entirely satisfied with your life? Wish there was an alternate universe out there someplace where you could lead a more exciting existence? Then MMORPGs (or MMOs for short) may be the place for you.

Massively Multiplayer Online Role Playing Games are the Internet descendants of paper-and-dice games such as Dungeons and Dragons. The bridge between the “dead tree” games and the online versions were MUDS – Multi-User Dungeons – popular on bulletin board systems for awhile.

Probably the most famous MMO is *World of Warcraft*. *WoW* players create characters – called avatars – for themselves. Then they use their avatars to interact with other users in the game’s online environment. Non-Player Characters controlled by the game set up quests for players, sending them in groups on missions to kill bad guys, recover objects and amass virtual wealth and experience.

A successful MMO can be a massive moneymaker for its creator. Companies typically charge not only a one-time purchase price for the software to play the game but also a monthly fee to stay connected to the world. Further, in-game economies can be connected to real-world funds, allowing players to exchange actual money for virtual cash or other valuables in the game.

Multiuser games have even crossed over into the realm of social media. The Second Life world is set up like a game with avatars and virtual environments. But players use it more for social interaction and information exchange than for dungeon crawling or dragon slaying.

Thus MMOs have become a high-dollar corner of the gaming industry. They bring in more than a billion dollars per year. *WoW* alone currently has more than 11 million subscribers.

Workflow in the workplace

Game development

Good game design is a tricky business. In many ways, development starts out the same way in the game world as it does in movies. The project needs characters: good guys and bad guys. The good guys need a goal of some kind, and the bad guys get set up to keep them from reaching it.

Obviously complexity will vary. Tiles in a puzzle game don't need a lot of character traits. But the characters in an adventure game need even more personality than their movie counterparts, because players will spend a lot of time interacting with them.

Once the idea is solid, bust out the software. Big money game design companies employ legions of programmers, modelers, artists, writers and so on. Smaller operations require a jack-of-all-trades approach. Fortunately, creative types can use game design software packages to do a lot of the "low level" code work.

Once the "rough draft" is complete, extensive testing has to be done. Testers check not only for errors in the system (glitches that can cause the logic to fail or the game to crash) but also for playability. Does the game move smoothly from challenge to challenge? Do the characters play their parts well? Is it fun?

Assuming the game survives testing (and many don't), the marketing folks take over and try to figure out how to convince potential players that the new game is the greatest thing ever.

Industry

How the industry makes money

Game genres

In the gaming world, players (and companies) differentiate by genre. Unlike movies (where genre is determined by what kind of story is being told), games divide up based on how the game is played. Eight quick examples (of the dozens out there in the market):

Shooters – Back in the *Space Invaders* era, most games were simple shooters. Now the genre is divided into two parts. First Person Shooters (FPS) show the world from the point of view of the player's character, while in Third Person Shooters (TPS) the player character appears on the screen (usually toward the bottom) and the viewpoint follows him or her around. No matter what the type, the main goal of a shooter is – surprise surprise – to destroy things.

Role Playing Games – RPGs require more complex interaction with the game's environment than a shooter does. Behavior in the game is more like actual human conduct in the real world. And in MMOs, the player interacts not just with computer-generated characters and situations but also with other players.

Puzzles – Though they don't generally feature a lot of plot or character development, puzzles are great for when you're stuck in the waiting room at the dentist's office with nothing but a smart phone for company. Game companies like puzzles as well, because they don't generally cost as much to develop.

Platform hoppers – These games aren't as popular as they used to be. As the name implies, players advance to the next level by jumping from spot to spot.

Simulators – Starting with flight trainers back before computers even existed, simulators try to at least semi-realistically reproduce some aspect of the real world. Flight simulators are the most common.

Sports – All kinds of sports have been turned into videogames. Big professional sports (NFL, NBA, MLB) tend to be the most popular. Increased graphics quality in recent console "generations" has greatly improved the realism of game play. If nothing else, the players now look at least a little like their real-world counterparts.

Music – Games such as *Guitar Hero* invite players to follow along with popular music, using their controllers to roughly approximate playing instruments. Some games even come with instrument-shaped controllers.

Strategy – Found more often on computers than on consoles, strategy games require complex manipulation of elements. They can be as "simple" as a game of chess or Risk, or they can be more complicated recreation of cities, businesses and battles.

Sequels, franchises and licensing

What makes a game easier to sell? Connections to something else people are already buying. Thus was born the world of sequels, franchises and licensing.

Big media companies love synchronicity, ties between one product and another that helps them both sell better. So if a corporation's movie division is getting ready to come out with a big summer blockbuster superhero movie, you may rest assured that the videogame division will have the game version on shelves in time for Christmas (if not before).

Even absent ties to other media, new releases often have connections to older games. As of this writing, the Angry Birds franchise has three titles across half a dozen platforms. Expansion packs also increase the playability of a game that's already popular with players.

Who owns what

The Big Three

Overall the videogame market has some room for small developers. Particularly in the post-disc world of game delivery, marketing games doesn't necessarily require huge

budgets. However, large corporations dominate the portions of the industry that require large investments. No big surprise there.

The console market is a perfect case in point. It's dominated by the Big Three, large companies with little competition other than each other.

The "elder statesman" of the consoles is Nintendo, a Japanese company that began life in the 19th century manufacturing playing cards. Emerging from the ashes of early 1980s industry shakeups, the company's NES box was the industry's first long-term success. It also had a string of hits with portable devices from the Game Boy to the DS.

To be sure, the company hit a bump or two along the way (anyone remember the GameCube?). But Nintendo's latest, the Wii, is selling well.

After decades of success in other corners of the media world, Sony entered the game market in 1994 with the original PlayStation. Its follow-up, the PlayStation2, is the best-selling game console in history. Its portable PSP and latest console (the predictably-named PlayStation3) have also been big victories for the company.

Washington-based Microsoft is the only non-Japanese member of the Big Three. Fortunes from sales of the Windows operating system and other personal computer software bankrolled the company's effort to develop and market the Xbox. The Xbox 360 is the company's current entry in the console market.

Careers

In the corporate world

A team effort

As already noted, the game development divisions of large companies tend to hire specialists, people who are great at one particular part of the design process rather than merely good at everything.

As most big company games start more or less from scratch, they require **programmers** to write the code. This specialty can be divided into sub-specialties, coders who specialize in game play, special effects, environments and so on.

Before the coders can get started, people on the creative side have to come up with a concept. This requires **writers** to invent plots and characters. It also requires **artists** to decide what game elements will look like.

Once the story and visual "models" are in place, **techies** get busy making it work. Modelers and other CAD specialists create computer versions of the characters and environments. And then of course the programmers build the game's structure incorporating the artists' designs and the writers' plots.

When the game is complete, professional **testers** make sure it works the way it's supposed to. And then **marketing** pros take over and (hopefully) get it to sell.

Oh, and just for what it's worth, some folks out there actually get paid to play videogames. Like other professional sports, you have to be good at what you do in order to succeed. Unlike other professional sports, pro gaming isn't necessarily a quit-your-day-job career option.

DIY

Software Development Kits

If you're trying to break into the hardware world as an indie by developing your own console system, well, good luck with that. On the software side, however, there's more room for folks working on their own or in small businesses.

Indeed, the Big Three actually encourage small game creators by providing Software Development Kits. These kits help people who have a good idea for a game but may lack the low-level programming expertise to actually make that idea a reality. Even the best SDK won't exactly create the game for you, but with a little tech savvy and a strong work ethic, game development is at least within the realm of possibility.

That isn't to say that even a great concept is an instant ticket to easy street. After you get your game designed and debugged, you'll still face stiff competition from all the other software designers trying to sell their games, some of whom are big media corporations with a lot of money for advertising and other promotions. Even though you may not get a four-course dinner, at least you can sit at the table.

SDKs are also available for popular computer operating systems, such as Windows and Mac OS. And of course if you're ready, willing and able to learn more about writing computer code, you may be able to achieve "custom" results not readily available with an SDK.

Getting started

The usual advice

Each sub-specialty of the game development world requires a different skill set. If you're not real crazy about Math and computer science classes, the programming side may not be for you. On the other hand, if you can't draw it might be better not to seek a career in the art department.

At a small or even medium-sized company, being a "multi-tool" employee will make you popular with your boss and co-workers. Even if programming isn't your full-time job, a little knowledge in the area will help you understand what the hardware and software can and can't do and communicate more effectively with the people who code for a living.

Thus my general advice in this medium is to become comfortable with as many parts of the job as you can. This will make you more attractive to potential employers, and you'll be better prepared if you decide to go it on your own.

Ethics

Personal morality and the profession

The Tetris Effect

How much is too much? It's a question that's plagued humanity since the days of the ancient Greeks. And for folks who don't care for videogames and want to see them restricted, the question of addiction is a popular line of attack.

Gaming can be addictive, which makes it the same as just about everything else in the world. However, videogames have some traits that pose specific problems, one of which is informally known as the Tetris Effect. Extended periods of game play can lead to minor psychological disturbances in which elements of the game (such as the tiles in the popular puzzle game Tetris) can still be seen even after the player stops playing. In some cases they even show up in dreams. These minor-league hallucinations aren't dangerous, but they do tell us something about the psychological depth of gaming.

Weird psychology aside, some game are just plain, old-fashioned addictive. While some games are "throw-aways" (play 'em once and you're done), others invite multiple play-throughs. And others – especially MMORPGs – don't really have a beginning, middle or end. So players can keep coming back again and again, getting a new experience every time.

So how much is too much? Mental health professionals disagree on the answer, as you'll find in some of the links below. Personally, I'm no mental health professional. However, I did read a story about some folks at MIT who designed a "World of Warcraft Hut." This booth-sized structure includes all the computing power a serious gamer can use. It also has a stove and a fridge. And the seat doubles as a port-a-potty. For my tastes, letting the game dictate when and where you eat is a yellow-light situation, and not getting up even for long enough to take a bathroom break moves you right into red.

Attack of the jerks

Interpersonal communication depends heavily on visual clues. Though words are important, facial expressions and body posture also do a lot of the job. Even if a friend tells you she's happy, the angle of her eyes or the tone of her voice can tell an entirely different story.

Such clues are absent in the online world. With little to go by except text messages and avatars, people interact differently in online environments such as MMORPGs than they do in the real world.

Most people have little trouble adapting to the new environment. But for some, the online world frees up their inner jerk. They insult other players, treat even members of their own teams with disrespect, and just generally behave in ways that would draw swift, negative

response in the real world. Some even software hacks that allow them to cheat, beating opponents badly on an uneven virtual playing field.

To be sure, a certain amount of abnormal behavior is expected online (how many bad guys have you stabbed to death at work this week?). But many players agree that online jerks cross the invisible line. Especially in games that require players to cooperate in order to achieve goals, a bad apple can really spoil the experience for everyone.

So what's to be done? Some critics suggest using fees in place of visual clues. If everyone you're playing with agrees that you're being an ass, the game automatically charges you extra. Or conversely, if you're well-liked the game might give you a discount.

Industry self-regulation

The ESRB

The gaming industry is big. Its products appeal to both adults and children. And as we'll see, game content isn't subject to a lot of government regulation. Such an environment is ripe for intense industry self-regulation. And the Entertainment Software Rating Board is just that.

Back in the early days, concern about sex and violence in games such as Pong was fairly minimal. But with the advent of games such as Mortal Kombat – in which a “cheat code” unlocked a feature that dramatically increased the level of blood and gore – detractors began to grumble. Initially the industry response was less than uniform. But eventually the big companies got together and set up the ESRB.

The board's job is to assign ratings to games. The ratings are divided into two parts. The “big letter” rating helps consumers distinguish between games aimed at children, games designed for everyone, and games intended only for older players such as teens and adults. The system also includes an “AO” rating that indicates content inappropriate for anyone under 18 years old (though critics accuse the ESRB of applying this rating only to games with sexual content without regard to the amount of violence in the game).

The second part of the rating is “content descriptors.” These provide more specific information about controversial content ranging from sexual violence to smoking.

The ratings process is tricky. Companies pay a fee and submit video of the most extreme parts of the game, and the board turns the footage over to three trained raters. If the company doesn't like the rating the game gets, it can redo the game and resubmit or appeal the rating to a committee composed of “entertainment software industry representatives.”

So why do companies bother to pay the \$800 to \$4000 to get ratings slapped on their games? Because many big retailers won't carry games unless they have an ESRB label on the cover. Further, the AO rating is a kiss of death outside limited niche markets. Retailers such as Amazon and Wal-Mart won't carry AO games, nor will the Big Three license such games for their consoles.

Law

The First Amendment and free speech

Schwarzenegger vs. Free Speech

Unsatisfied with the effectiveness of the gaming industry's self-regulation, a handful of states have tried passing laws restricting game sales to children.

California's experience is typical. In 2005 the state's legislature passed a law imposing a \$1000 fine on anyone caught selling a violent videogame to someone under the age of 18. The law defined as "violent" any game "in which the range of options available to a player includes killing, maiming, dismembering, or sexually assaulting an image of a human being." Loosely construed, such a restriction would apply to just about every M game on the market and a fair number of T games as well. The law further required all "violent" games to bear a two-inch-square warning sticker on the cover.

Gaming professionals had a sarcastic laugh when Gov. Arnold Schwarzenegger – the star of several R-rated, violence-packed movies – signed the bill into law. Then game producers sued the state, alleging that the new law violated their First Amendment right to free speech.

The United States Supreme Court agreed with the game makers. Observing that violence is a part of many childhood media experiences – such as Grimm's fairy tales – the court found that games couldn't constitutionally be restricted any more than any other medium of mass communication.

Passing such obviously unconstitutional laws can cost a state serious money. In addition to the expense of passing a new statute and defending it in court, the government can end up ordered to pay the costs incurred by the game companies during their legal challenge. In Illinois the state actually had to take money away from cash-strapped government programs in order to pay a large penalty incurred as a result of passing an anti-game bill.

Lawsuits and the courts

The suits people file

Like any other multi-billion-dollar industry, videogames are the subject of a fair number of lawsuits. In the early days (and even today) suits frequently revolved around copyright problems, when one company had a big success with a game and a competitor came out with something that was just a little too close for legal comfort.

As games became more profitable and began to draw celebrity endorsements, the legal hassles with endorsement deals weren't far behind. Several athletes and musicians have sued over characters in games that "borrow" their names and images without their permission (or to be more specific, without paying for permission). But endorsement

deals are two-way streets. When Beyonce allegedly backed out of a deal to put her name on a new music game, the developer sued her claiming her move had cost them millions in potential sales.

And of course some plaintiffs always stand ready to accuse the media of ruining their lives. Complaints have ranged from “a game encouraged someone to shoot me” to “the company should have warned me that playing the game would cause me to develop a time-consuming addiction.”

Movies

The Liveliest Medium

Film historian Arthur Knight called movies “the liveliest art.” Movies have light and sound. They create an illusion of motion. They feature dialogue and music, plot and character, action, romance, you name it, it’s in a movie somewhere.

Further, there’s just something about seeing a movie in a movie theater. The experience affects us psychologically in ways most other media don’t. I sadly admit that – like many other people – most of my movie consumption is at home rather than at a theater, and even a large, high-def screen isn’t the same as the full theatrical experience. But on the flip side, nobody yaks on a cell phone or aims a laser pointer at the screen in my living room.

Movies are also the most American medium. From the early days of Edison’s studio to Hollywood’s golden age, movies were a huge cultural export from the United States to countries all around the world. Even today American studios tend to dominate the market, though many other nations have their own lively movie industries.

Famous director Cecil B. DeMille sometimes began his movies by delivering a filmed speech before the opening credits. The practice struck me as sort of silly. Nobody came to hear him pontificate. They came to see the story he was about to tell. So in that spirit, let’s dig in.

History

Key moments

The Kiss

One of the first movies ever shown caused the movie industry’s first “sex scandal.”

Once the folks on the technical side figured out how to make the medium work, it was up to the early movie producers to come up with something audiences would actually want to watch. Most of the “movies” made at the Edison Studio prior to 1896 were intended only to test the new equipment or study motion from a technical standpoint. Subjects were often nothing more interesting than a technician jumping up and down.

In order to draw actual, paying audiences, the studio turned to that old standby: sex. They hired a couple of well-known stage actors to kiss in front of the camera. In theory this was a film version of the end of *The Widow Jones*, a stage musical. But of course with only 40 seconds of running time, the movie didn’t amount to much more than a kiss between the two characters.

By our standards, the picture is beyond tame. Indeed, even by 19th century standards it wasn't all that scandalous, especially compared to the "French postcard" pornography business that would soon spread to the fringes of the new medium. Nonetheless, this simple expression of affection upset many critics who felt the movie business was getting started on the wrong foot. *The Kiss* produced the first – but sadly not the last – outcry for government censorship of movies.

Birth of a Nation

In the movies' early days, audiences were easy to please. "Actuality films" – short clips of trains going by or people walking down the street – were enough to keep people entertained. But as the novelty of the new medium started to wear off, the public needed something better.

In 1914 director D.W. Griffith began shooting what would become known as the world's first narrative film, the first production to make use of many of the visual storytelling techniques now common in just about every movie ever made. *The Birth of a Nation* demonstrated what the new medium could really do, helping transform it from a passing fad to an enduring cultural force.

Yet despite the movie's key role in motion picture history, it's rarely shown in film studies classes (indeed, I earned a Bachelor's degree in film without ever seeing it). The problem: overpowering racism. Even by the less sensitive standards of the early 20th century, this picture is way over the top. It tells the story of the "heroic" Ku Klux Klan, bravely defending the flower of white womanhood against predatory black men (played by white actors in blackface) in the wake of the Civil War. The picture is credited with helping to revive the Klan.

Although Griffith's technical genius was buried under a pile of vile nonsense, the movie was popular with audiences (white audiences, anyway) and many critics. The director went on to make less offensive use of his talents, and other filmmakers used his techniques to create the movies as we know them today.

The Jazz Singer

As we'll see when we get to the history of movie tech, sound is a tricky business. For the first three decades of their history, movies were "silent." Many of them were designed to be accompanied by live music from pianos, organs or (in big cities with "movie palaces") whole orchestras.

In 1927 Warner Bros. came out with the first "talkie," a feature-length movie with synchronized singing and dialogue. *The Jazz Singer* used sound recorded on sound discs, which turned projection into a complicated affair requiring skilled technicians in the projection booth. The studio invested heavily in the production, essentially betting the farm that audiences would flock to see this new technological wonder.

The bet paid off. Critics and audiences alike were impressed by the movie. The complexity of the projection process also forced changes in the way movies were

distributed to theaters. Most of all, it proved beyond question that “talkies” were a technical and popular success. Though some studios still regarded them as a fad, in reality the age of motion picture sound had begun.

Citizen Kane

Ask a variety of serious film experts to make lists of the best movies ever made, and you’ll get a variety of responses. But one movie makes just about every list.

Director Orson Welles was new to Hollywood in 1939 when he was signed by RKO Pictures. Despite his lack of experience, the studio gave him “final cut,” absolute creative control over the movies he made. With this rare leeway, he made *Citizen Kane*.

The movie tells the story of Charles Foster Kane, a thinly-disguised fictional version of newspaper baron William Randolph Hearst. At the beginning Kane is young and idealistic, but he ends up corrupted by his own wealth and power. Needless to say, Hearst wasn’t exactly flattered by the portrayal. He tried unsuccessfully to get RKO to kill the movie. And his newspapers made no mention of the movie at all, helping to assure that it flopped at the box office when it was released in 1941.

Despite its initial commercial failure, the picture remained popular with critics and academics. Welles’s skillful combination of script, characters and technical innovation made it an excellent example of cinema art. It got a lot more favorable attention in its 1956 rerelease, cementing its place in the history books. It also made Welles responsible for key moments in two different media (we’ll meet him again when we get to the radio chapter).

Rebel Without a Cause

In the 1950s the movie business found itself up against competition from the newly-emerging television industry. TV sets served up the same audiovisual entertainment people used to have to go to movie theaters for, but television did it at home for free. In order to compete, the movies had to do something that television couldn’t (or at least wouldn’t).

One of Hollywood’s new marketing strategies was to provide people with stories too taboo for FCC-regulated, family-friendly TV shows. Mental illness, alcohol and drug abuse, teen rebellion and other scandalous topics helped draw audiences back into theaters. Though many of these pictures are tame by today’s standards, at the time they were groundbreaking stuff (especially from the big Hollywood studios).

Rebel Without a Cause was the most famous and most typical example. James Dean and Natalie Wood headed a cast of teens struggling with drinking, street racing and dysfunctional relationships with their parents. Despite a generally preachy script, the actors manage to create a genuine sense of teenage malaise that caught on with audiences. Box office receipts may also have been boosted a bit by Dean’s death in a car crash less than a month before the movie premiered.

Night of the Living Dead

From its origins in the 1890s, major studios, big corporations that controlled every aspect of the business, dominated the movie industry. Even in the early days, however, independent producers provided the studios with at least a little competition. “Indy” movies didn’t haul in tons of cash the way studio releases did (or at least were designed to do), but then they didn’t cost millions to make, either.

In the 1960s, independent movies began to emerge from the shadow of studio blockbusters. Filmmakers such as George Romero figured out that for a few thousand dollars anyone with a camera could make a movie. Indies couldn’t match Hollywood’s technical quality, and they didn’t feature expensive, big-name stars. On the other hand, directors who weren’t under the studios’ thumb had a lot more creative leeway.

Romero’s *Night of the Living Dead* is an ideal example of this new movie movement. This black and white tale of zombie mayhem is more than a little rough around the edges. But the script is good, the cast works well, and the production goes farther into horror violence than mainstream movies would have at the time.

The movie sparked an entire sub-genre of sequels and imitators. Romero spent \$114,000 to make the movie, and it earned more than \$12 million before somebody noticed that the original distributor didn’t include a proper copyright notice, thus placing the movie in the public domain. The picture’s creative and financial success helped prove that people could work outside the system.

Star Wars

Facing ever-increasing competition from television, independent productions and foreign imports, in the 1970s Hollywood studios fell back on their one big advantage: blockbusters. Movies with big stars, huge production budgets and equally huge promotional campaigns were still the sole domain of the corporations who’d been in the business for decades.

In 1975 director Steven Spielberg gave the movie world a taste of the new blockbuster world to come. *Jaws* wasn’t exactly a cheap production, but it wasn’t a huge investment by studio standards. But it caught on big with audiences, turning huge profits and leaving even some people in Kansas afraid of sharks.

But it was eclipsed just two years later by *Star Wars* (now known as *Star Wars Episode Four: A New Hope*). It didn’t cost a fortune to make. It captured the public’s attention in a big way. And it went one step further: in addition to box office receipts, the movie made a ton of money from ancillary merchandise. The Star Wars brand showed up on clothes, toys, lunchboxes, you name it. And of course it spawned a string of sequels. The result went beyond “popular movie” and became a genuine cultural phenomenon.

Do the Right Thing

In the late 1980s, the American dialogue about race had stagnated. The civil rights movement of the 1950s and 60s had lost steam, its leaders assassinated or marginalized.

Integration and affirmative action had achieved enough success that many white people began to believe that racism was no longer a problem.

In 1989 director Spike Lee scraped the scab directly off the racism wound with *Do the Right Thing*. His comic-dramatic tale of racial tension on a hot day in New York City spoke openly and honestly about prejudices that had vastly overstayed their welcome.

It almost goes without saying that some critics reacted strongly against the movie, accusing it of stirring up race hatred and potentially provoking riots. However, others recognized the film's quality and the importance of its message. *Do the Right Thing* won several awards and occupies a spot on a number of "best movies" lists.

Key players

W.K.L. Dickson

Though Thomas Edison is often identified as the Father of the Movies, many of the key inventions that made the first motion pictures possible were actually created by Edison's employee, William Kennedy Laurie Dickson. Though Edison worked out some of the electrical details, Dickson was responsible for working out the complicated mechanics of motion picture cameras.

The Edison company set up the world's first "movie studio" in West Orange, New Jersey, in 1893. Called the Black Maria, it was basically a big box with a large skylight in the top. At the time the sun was the only light source bright enough to expose film fast enough for a movie camera, thus the studio was set up on circular tracks so it could be rotated to follow the sun across the sky.

Of course it wasn't enough to just shoot a movie. People had to be able to watch it as well. So Dickson developed the Kinetoscope, a box with a small viewing screen in the top. Viewers could stand one-at-a-time next to the box, peer in through the screen and watch short films.

And short means short. The first copyrighted movie was a two-second clip of Edison employee Fred Ott sneezing. Most Kinetoscope films were a bit longer than that, but their length was still limited by the amount of film that could be stuffed into the box.

The Lumiere Brothers

Edison and his staff proved that movies could be made. But their exhibition device, the Kinetoscope, suffered from serious movie length and audience size limitations. On the other side of the Atlantic, however, another pair of inventors were solving the problems that limited Edison's success.

French brothers Auguste and Louis Lumière were the first to figure out the crucial step the movie industry needed to move past the "nerd stage" and become a true mass medium. Rather than stuffing movies into a box, the Lumières invented the movie

projector, which they called the Cinématographe. By shining a bright light through film, they got images to project onto a screen. This allowed an entire theater full of people to watch a movie at the same time (rather than the one-at-a-time viewing of the Kinetoscope). And projectors could show as much film as could be run through them (especially if more than one projector was used in series). So movies were no longer limited to short clips.

Shortly thereafter Edison's team came up with a similar device called the Vitascope, and the movies were finally on their way to becoming a full-fledged mass medium.

Louis B. Mayer

If I had to pick just one person to represent the Golden Age of Hollywood in the 1930s, that person would be Louis B. Mayer. He was the final M in the MGM studio, and he's most famous for inventing the Hollywood star system.

Born Lazar Meir in Ukraine, his family immigrated to Canada. When Mayer was 19 he moved to Boston, where he purchased and renovated a theater, thus beginning his career in the movie business. After making a chunk of cash by buying the New England exhibition rights to *The Birth of a Nation*, he moved to California and went into the movie production business.

Meyer recognized the value of marketing movies based on their stars, so he negotiated contracts that kept big-name actors working for MGM rather than whichever studio happened to be paying the most. Thus his stars worked more like employees and less like independent celebrities. He had a reputation as a skilled negotiator, earning him a mixed reputation among the stars who worked for him.

His business model paid off. During the Great Depression, MGM was the only movie studio that consistently paid dividends to its investors. As a result, Meyer became the first person ever to earn an annual salary greater than \$1,000,000.

After World War Two, however, his fortunes reversed. The movie industry fell on hard times thanks to competition from television, and MGM stuck to a diet of "wholesome family entertainment" pictures that had trouble competing in the new movie marketplace. Though he had made millions from the business, he wasn't a major shareholder in the studio. So when it faced financial ruin, the studio fired him.

Sergei Eisenstein

Here's an experiment you can try on your own: the next time you're watching a movie, count how long the shots last. When a new shot begins, count the seconds until the movie cuts to a new location or camera angle. For most movies, more often than not you won't find yourself counting much higher than five.

This wasn't always the case. In the early days, filmmakers tended to regard themselves as the heirs of the theatre business. Shots were static (the camera didn't move around a lot) and long, recreating the experience of watching a play.

Then in the 1920s a movement arose in the Soviet Union that took an entirely different approach. These new moviemakers – most prominently director Sergei Eisenstein – regarded cinema as a graphic art. They concentrated not just on the story but how it was visually told. Shot had to flow together when they were edited. Eisenstein's 1925 silent film *The Battleship Potemkin* is still used in film schools today to teach editing technique.

His new way of putting movies together greatly strengthened their impact on audiences. Because his most famous work was created under the Soviet system, they're not only technical textbook examples but also strong pieces of Communist propaganda.

Leni Riefenstahl

Despite considerable talent as a movie director, Leni Riefenstahl's career was hampered by two things: she was a woman and she worked for the Nazis.

Riefenstahl began her career in Germany making movies about mountain climbing. But after Adolph Hitler saw her work, he invited her to make a movie about the Nazi Party rally in Nuremberg in 1934. The resulting documentary – *Triumph of the Will* – remains one of the most famous propaganda pictures ever made. Large portions of the movie are boring and/or evil speeches by party officials, but the rally overall was designed to be an immense show of Nazi power. The documentary captures the spirit of the event.

Her next feature-length project was a picture about the 1936 Olympic Games in Berlin. *Olympia* is a landmark moment in the art and science of visual sports coverage. Have you ever seen a sports broadcast in which a camera moves to follow an athlete? Riefenstahl invented that.

Of course when one does brilliant work in the service of something as monstrous as Nazism, it can be a real career killer. Though officially cleared of connection with the Nazis' crimes against humanity, her involvement with Hitler's regime dogged her for the rest of her life. It also kept her from receiving the recognition she might otherwise have gotten for success as a movie director, a field still strongly dominated by men.

Gordon Parks

Kansas native Gordon Parks was one of those remarkable people who seem to be good at just about everything he tries. Musician, composer, author, photographer, painter, civil rights activist, and successful at all of it. However, here we're concerned with his career as a filmmaker.

After serving as a consultant for a series of movies about life in American ghettos, Parks made history by becoming the first black director of a Hollywood movie. The production, *The Learning Tree*, was based on his autobiographical novel of the same name.

His most famous movie, however, was *Shaft*. Released in 1971, the picture featured Richard Roundtree as a private detective hired to find the missing daughter of a gangster. The movie was a big hit, thanks in no small part to the soundtrack by Isaac Hayes. It helped usher in the era of "Blaxploitation" movies, productions that rely heavily on 70s era Black stereotypes.

By today's standards the clothes are outlandish and the dialogue even worse. But at the time, such movies were a big step for Black actors. In this new breed of picture they played action heroes, love interests and many other roles denied them in the butler-and-maid world of traditional Hollywood filmmaking.

Steven Spielberg

If Louis B. Mayer is the name that comes to mind whenever Hollywood's Golden Age comes up, then Steven Spielberg gets a similar honor for his role in the current world of Hollywood blockbusters.

Spielberg began his career directing TV shows and relatively small movies. His first big hit was *Jaws*, which made hundreds of millions of dollars and ushered in the Era of the Blockbuster. His next big hit – *Close Encounters of the Third Kind* – would most likely have enjoyed a similar level of wild success had it not been overshadowed by *Star Wars*.

In 1981 he made *Raiders of the Lost Ark*, the first installment of the successful Indiana Jones franchise. Then in 1982 he created *E.T.*, his single biggest success.

After that he moved away from blockbuster “formula” pictures and into more serious filmmaking with pictures such as *The Color Purple* and *Schindler's List*. Though none of his later movies ever approached the high water mark set by *E.T.*, he still maintains a solid lead as the all-time leading director in box office gross, his nearly \$4 billion almost doubling his nearest competitor.

With his earnings he co-founded DreamWorks Pictures in 1994.

Technology

Origins (the nerd stage and beyond)

Sound

The trick with getting movie sound to work is that it has to synchronize precisely with the picture. Even a delay of less than a second can produce a disturbing disconnect between audio and video, especially for shots of people talking.

Thus sound was a challenge that took decades to solve. During the silent era, cards edited into the action delivered dialogue. Though these made international distribution easy (just edit in new cards for each language), they interrupted the flow of the picture and forced people to read. The only sound was provided by musicians playing scores composed for the movies or improvising based on what was happening onscreen.

When “talkies” first hit theaters, sound was recorded on discs. Projectionists had to make sure to start the records at exactly the right moment so the audio and video would match. Even a show that started out on the right foot could go bad if the record skipped at all (which records tended to do). The movie *Singin' in the Rain* has a hilarious sequence in

which an early talkie's sound gets out of sync and the characters look like they're delivering each other's lines.

The only way to make sound work reliably is to make it part of the film itself. This was done either optically (sound vibrations recorded as light fluctuations on the side of the film) or magnetically (a thin strip of recording tape built into the film). The picture and the sound were in slightly different spots in the projector, so editors had the tough task of getting everything to match up. But at least once they got it working it would work reliably.

Digital filmmaking stores sounds and images as data. The computers used to edit and play digital movies make everything match automatically, saving a ton of hassle in the editing stage.

Color

Years of teaching about movie history have taught me that some students tend to get confused about when Hollywood started making movies in color. So let's start with the basics in simple terms: the studios started using color in the 1930s, not the 1950s. Thus color was *not* invented as part of the movie industry's response to competition from television. Color became more common after television entered the media marketplace, but it was originally created a couple of decades earlier.

Actually, if you want to split hairs, many silent movies included color of one kind or another. Some were hand colored by artists who painted each individual frame, which of course was prohibitively expensive except for major releases in big cities. In the alternate, entire scenes were sometimes dyed a uniform color so at least they weren't just plain black and white. Colors represented settings and moods, with blue for nighttime, green for outdoors, pink for romantic scenes, and so on.

In the early 1930s (not too long after movies started including sound), technicians figured out how to shoot in realistic-looking color. The process requires layered film. Rather than just recording a single black and white image, the new film recorded three overlapping images: one red, one blue and one green. These three colors could be combined to reproduce just about every visible color.

Technicolor, the first system to take advantage of this new innovation, was expensive. At first it cost so much that even the studios wouldn't use it. Improvements brought the price down a bit, but color still tended to be the domain of big-budget studio productions. Further, the process produced extremely bright colors, making movies that looked a little too pretty to be real.

Thus many filmmakers continued to shoot in black and white well into the 1960s, either because they couldn't afford color or because they wanted their movies to have a sense of gritty reality rather than ultra-colorful fantasy.

Widescreen

All pictures have an **aspect ratio**, the proportion of the image's width to its height. Painters have a lot of leeway in this department, because they can stretch canvases to whatever proportion they like. Filmmakers, on the other hand, have to stick to aspect ratios that will work with cameras and projectors.

Edison's studio established the movies' ratio at 4:3 (or 1.33:1 if you prefer decimals), a proportion based on classical Greek art geometry. So if a movie screen was four feet wide, it would need to be three feet high. An eight foot wide screen would be six feet high, and so on. In 1931 the Academy of Motion Picture Arts and Sciences (the Oscars people) made a slight adjustment in the ratio (changing it to 1.37:1), but otherwise it remained the same for decades.

Then along came television. TV screens were absolutely locked into the 4:3 ratio, which gave movie folks an opportunity for a competitive edge. They began looking for ways to make images wider, creating a greater sense of largeness and importance.

Using **anamorphic** techniques, widescreen movies could be shown by making just a few adjustments in existing projectors. Other widescreen formats required larger film, which in turn required new projectors. VistaVision ran the film through the camera sideways in order to record a wider picture, and Cinerama actually split the picture up into three parts, requiring three perfectly synchronized projectors to show a movie.

The U.S. television industry didn't enter the world of wider aspect ratios until HDTV came along in the 21st century. The new format uses a 16:9 ratio (or 1.85:1 for decimal fans), also commonly used in the movie business.

How it works (the state of the art)

Persistence of vision

Motion pictures don't actually move. Instead, they're made up of a long series of still photographs shown in a sequence rapid enough to trick the eye into perceiving motion.

Originally this was a trick used in a kids' toy called a Zoetrope, which spun around and made the pictures inside look like they were moving. But then photographers such as Eadweard Muybridge started taking sets of photos of objects in motion. Muybridge shot his first series of a horse just to settle a bet about whether all four of its hooves left the ground at the same time when it ran. But it was only a matter of time before the Zoetrope and the photograph wedded and gave birth to the motion picture.

In the 19th century some scientists thought the illusion was created by "persistence of vision," the theory that images lingered in the eye for a brief period, sort of like the superstitious belief that by looking into a murder victim's eyes you can see the last image he saw. Though we now know that isn't how it works, scientists still aren't completely sure why it happens. Current thinking is that we perceive motion based on differences

between what we see from moment to moment, though even that doesn't completely explain the phenomenon.

In the movie world, displaying 24 frames per second creates the illusion. Television's 30 frames per second are a little faster.

Digital moviemaking

Making movies using film is a colossal pain in the butt. Film is expensive to buy, expensive to process, temperamental, non-reusable and – worst of all – you can't tell what you got until after it's been developed. On big budget Hollywood productions, that requires "rushes" (also known as "dailies"), rapidly-made prints of the day's work used just to make sure that nothing got messed up.

Editing film is also a difficult process requiring expensive machinery and skilled professionals. If the edit isn't done exactly right (or if the director sees the result and wants to make a change), a new copy of the film has to be made and the process starts over again.

Digital cinematography solves a lot of these problems. Whether moviemakers use tapes, discs or other ways to record the data, digital media are considerably cheaper than film. It requires no processing. It's easy to edit. And best of all, you can instantly see exactly what you got by playing back what you just shot. Don't like it? Erase the old version (or save it for the blooper reel) and shoot another one.

Of course cameras for shooting theatrical release movies are more complex, higher resolution and considerably more expensive than a consumer camcorder. But they're still far cheaper than making movies the old fashioned way.

This should be a real blessing to the Hollywood studios, as digital production allows them to cut expenses and fire the people who used to do some of the now-unnecessary parts of the job. But the new technology has a downside as well. Because it makes production so much cheaper, digital cinematography opens the market up to competition from independent producers who would never have been able to afford to make movies on film.

3D

Any business that falls on hard financial times may resort to desperate measures such as gimmicks to draw customers. The movie business is no exception. In addition to tackling taboo topics and improving image quality, Hollywood tried to get a competitive edge on television by shooting some movies in 3D.

One of the ways our brains perceive depth is by comparing the differences between images from the right eye with images from the left. Movies recreate this effect by shooting two separate images and then combining them into a single picture. Viewers put on polarized glasses with lenses that block one of the two images for each eye, thus allowing them to "see in 3D."

The technology used back in the 1950s wasn't exactly the best, ensuring that 3D was a temporary ticket-selling novelty rather than a legitimate filmmaking technique. Likewise the version that emerged briefly in the 1980s failed to catch on.

The latest wave of 3D movies – which began in 2003 – appears to be a bit more successful. Changes in technology have improved image quality and reduced some of the eye-straining problems that plagued 3D in the past.

The big stumbling block at this point is creative rather than technical. Some directors under-use their equipment, shooting movies that look pretty much the same in 2D as they do in 3D. On the other hand, some over-use 3D, interrupting the flow of their storytelling to plug in long action sequences that don't accomplish anything other than adding a gee-whiz for 3D audiences.

Workflow in the workplace

Production

The movie business is a three-step process. Most of what we think about when we use the term “moviemaking” is the first step: production.

Studio-made movies begin life in the **development** stage. Somebody comes up with an idea that seems like it would be a good movie, and she tries to convince the people who control the money that she's right. If the movie will be based on a novel or other pre-existing work, the studio will have to buy the option to film it. Generally a screenwriter will prepare a first-draft script and a treatment in this stage. Many projects end up stuck in “development hell,” never moving beyond the planning stage.

If the studio “green lights” the idea, the movie enters **pre-production**. Based on the allotted budget, the producer hires everyone who will work on the picture. Often the script is storyboarded (illustrated with concept drawings so everyone can get an idea of what the final product should look like). Locations are scouted, sets are designed, deals are made with actors' agents and so on.

Once everything's ready to go, **production** starts. In movies about movies, this almost always seems to be the stage taking place. Lighting and sound are set, cameras roll, actors deliver their lines, the director yells “cut!” and the whole process starts over again.

When all the footage has been shot, the picture moves to **post-production**. Now editors labor to cut the shots together into the right sequence. Composers, sound effects technicians and visual effects technicians work their magic. Some movies are shown to test audiences, particularly if the filmmakers aren't quite sure whether one ending will work better than another. And if mistakes are found, sometimes reshoots are necessary (going temporarily back to the production phase to make up for flawed footage).

With a little luck and a lot of hard work by a lot of people, at the end of the whole mess they've got a movie.

Distribution

Once the movie is “in the can” (completely done and ready to be shown to the public), it’s entrusted to distributors. On the surface this is a much simpler process than production, as the distributor’s two big jobs are to make copies of the movie and get them to theaters. And theaters with digital projectors can download movies from the distributor directly, eliminating the need for physical copies.

Reality is a bit more complicated. Distributors have to work with theaters’ schedules, making sure that their movies get shown in good theaters at popular times. Distributing movies to foreign markets adds more layers of complexity.

The distribution department at the studio is also responsible for promoting the movie. That includes previews to show during other movies, TV ads, newspaper ads, press junkets that allow reporters to interview the stars, and so on.

Distributors also handle movies’ release to disc, Red Box, Netflix, pay per view, premium TV networks, basic cable and broadcast. Some movies never see theaters, going straight from production to the home video market.

Exhibition

Because if you produce a movie and distribute a movie, people have to be able to watch it, right?

For the first 70-80 years of its existence, movie exhibition was a relatively simple business. Theaters had one screen each, so they booked movies one at a time (kiddie matinees and midnight shows notwithstanding).

Then in 1962 Kansas City theater owner Stanley Durwood had an idea. He realized that if he divided his one large, money-losing theater into two smaller theaters, he could draw in more customers without increasing the number of ticket takers and popcorn sellers he had to pay. His new scheme was such a big success that he founded a company, American Multi-Cinema, to open multi-screen theaters across the country.

By the 1990s the multiplex had almost completely replaced single-screen operations except for smaller theaters specializing in independent “art” movies. AMC and its competitors run many locations with dozens of screens. Thus audiences now have more movies to choose from.

Industry

How the industry makes money

The studio system

Like just about every other industry, the movie business is dominated by a small group of large corporations. Currently most U.S. film production comes from the “big six”: Time

Warner, Viacom (Paramount), NewsCorp (Fox), Disney, Sony (Columbia) and Comcast/GE (Universal).

In the Golden Age, studios (a slightly different set back then) held a solid lock on the industry. Stars were employees just like everyone else, and if a director wanted to use an actor under contract to another studio then he had to bargain for permission. They also used tactics such as block booking to force theaters to show whatever the studios produced.

Thanks to competition and legal action, the studios gradually lost their stranglehold on the movie world. Though they're still exceptionally powerful players, they're no longer the only ones in the game.

Coattails

Making a movie costs a ton of money, especially if you're making a big Hollywood production. A successful picture can earn back many times the investment required to get it made and distributed. But even for a big corporation, hundreds of millions of dollars is a lot of money to gamble on a single product.

In order to reduce risk, Hollywood tends to churn out movies that are in some way related to previous successes. Some are sequels or follow-up installments in a series. Some are remakes of older American pictures or movies from other countries.

Sometimes studios even try to "scoop" each other. For example, when word leaked out that James Cameron (who had recently directed the hit sequel to *Alien*) was working about a movie set underwater, two rival studios rushed sea monster movies into production and got them to theaters before *The Abyss* was done.

And if you find that a bit shady, consider the fine art of the "mockbuster." Some smaller production companies with limited budgets have started making movies with titles and boxes that look a lot like popular, expensive studio productions. For example, Steven Spielberg's *War of the Worlds* was beaten to the video rental shelves by at least two other versions of the same story. As all the different versions were based at least loosely on a novel that had been in the public domain for decades, there was little Paramount or Dreamworks could do about the knock-offs.

The box office

Success and failure of theatrically-released movies is measured by "box office," which is simply the amount of money people pay to see them. It's a much simpler measurement system than the more complicated audience measurements in other media such as magazines and television.

Though the numbers are straightforward enough, they can paint a complex picture of movie success. Take a look at Box Office Mojo, a web site that specializes in financial figures from the movie industry. Movie success – and its evil opposite – can be calculated in just about any conceivable way. Need to know which movie did the most business over Thanksgiving weekend? It's there? How about the best among movies that opened the

Wednesday before Thanksgiving rather than the Friday after? That's there too. It also has the record-setter for drops in business after Thanksgiving.

And so on.

The Oscars

Once a year the Academy of Motion Picture Arts and Sciences hands out the Academy Awards, better known as the Oscars. In theory the awards recognize the best the film industry has to offer.

In practice, however, many critics charge that the Oscars have less to do with brilliant work and more to do with promoting movies. George C. Scott caused a stir in 1970 when he refused to accept the Best Actor Oscar for his work on *Patton*, describing the competition as a "meat parade."

There's a fair amount of support for this criticism. Of all the pre-Oscar prediction columns run in newspapers and magazines, one of the most consistently accurate is the *Wall Street Journal's* list of who stands to get paid the most in bonus contract money if their movies win. Further, the awards tend to follow Hollywood trends. When the studios are trying to encourage audiences to go see less expensive, non-blockbuster productions, such movies tend to do better in the awards.

Who owns what

The Paramount Decision

Until the late 1940s, the studios held vertical integration control over the movie industry. This means that there were only a handful of studios in the business, and each studio controlled all three steps in its own production / distribution / exhibition process.

The Justice Department saw this level of control as a violation of antitrust laws, and eventually it got the Supreme Court to agree. The legendary "Paramount Decision" ordered the studios to give up control of at least one part of the business.

The choice wasn't hard. By giving up the exhibition stage, the studios complied with the court's order without really surrendering much of their power. After all, without the movies produced and distributed by the studios, what would the theaters show?

Though some studios have come and gone over the years, conditions haven't changed much overall in the past decades.

Careers

In the corporate world

Jobs on studio productions tend to be highly specialized. If a company is going to spend \$100 million to produce and distribute a movie, it wants to make sure that everyone involved is good at their jobs. Of course that's a spiral of expense. The more skilled professionals you hire to do something, the more that something is going to cost.

Movies begin in the development stage with a **producer**, someone who thinks this particular project is a good idea. Generally she'll work with a **screenwriter** to come up with a script and a treatment (a brief summary) at this point.

If the project gets a green light, they'll generally start by bringing a **director** on board. In the "auteur theory" of movie production, the director is in charge of the picture's creative vision. He works closely with **casting directors** to make sure that the movie gets the **actors** he wants (and can afford). He also supervises the work of technical creative people such as **cinematographers**, **composers** and **editors**.

Each department in the production process employs many people. Just watch the end credits of any major Hollywood release to get an idea of how many folks it takes to make a movie.

DIY

Hollywood Shuffle

Producing a movie comes with your choice of price tags. On one extreme, you could make a video for YouTube. If that's the limit of your ambition, you probably don't need any more career advice from me. Go to it. And yes, believe it or not, some people do make money at the low end of the production value scale (though you probably shouldn't quit your day job right away).

At the opposite end lies the studio production. These cost on average somewhere around \$100 million to produce and distribute. If you make the average household income and save half of your money every year, it will take you a mere 4000 years to save up enough to pay for one of these.

In between are movies that don't cost more than you could ever pay but at the same time have at least some mainstream marketability. Low prices for movies that have made more than a million dollars in the U.S. range from the cost of a good used car (*El Mariachi*) to the cost of a nice house in the Kansas City suburbs (*The Texas Chainsaw Massacre*).

One independent producer found a unique way to pay for his movie. Robert Townsend wanted to make a comedy criticizing racism in the movie industry. Guessing that he wouldn't have much luck getting a studio to pay for it, he decided to get the financing together on his own. He managed to put together around \$100,000 by applying for every credit card that sent him an application. He made *Hollywood Shuffle* using the cards to

pay his actors in gas and groceries, and the movie was a hit with audiences and critics alike.

Getting started

It used to be easy to give first piece of advice for getting started in the movie business: move to Los Angeles. The city is still the “movie capital of the world,” but many other places throughout the country also have active filmmaking community. And there are good film programs at universities other than UCLA and USC.

To be sure, most studio jobs will probably require relocation to California. One of the common entry-level positions – **production assistant** – will keep you in the studio offices most of the time. The same applies to **readers**, those hapless folks who go through the piles of scripts studios and producers receive from aspiring screenwriters.

On the other hand, work is where you find it. Outside Hollywood, many jobs in front of and behind the cameras are work on **industrial films**, movies that help viewers learn how to deal with difficult employees or operate the new W6000 Open MRI Scanner. Still, a paycheck is a paycheck. The experience doesn't exactly hurt, either. You never know where it might lead.

Ethics

Personal morality and the profession

Noise in theaters

It's a tricky business, figuring out how much noise you're allowed to make in a movie theater. Extreme cases are easy enough. If you're at a midnight screening of *The Rocky Horror Picture Show*, you'll stick out like a sore thumb if you aren't yelling at the screen. On the other hand, if you go to an “art movie” then it's best to watch quietly.

For most movies, however, proper etiquette varies from theater to theater. Back when the Indian Springs Mall in Kansas City Kansas still had theaters, it was common practice for audience members to freely express their opinions. Indeed, the comments were often more entertaining than the movies themselves. But if you're in the Alamo Drafthouse theaters in Austin, Texas, don't talk. Don't even text. The theater staff aggressively ejects anyone who creates a disturbance of any kind.

The talk / don't talk line has been further blurred as people grow used to watching movies at home. Psychologically, this tends to make movie theaters an extension of the living room rather than kin to live theater venues where talking would be intensely disrespectful to performers and audiences alike.

Philosophy and the real world

Colorization

In 1985, Ted Turner announced that he planned to colorize *Citizen Kane*. The colorization process used computers to add color to black and white movies, and Turner-owned MGM had already used the process on several classic movies.

Turner and others who owned the rights to lots of black and white movies saw colorization as a way to make new money from old pictures. Most folks didn't seem to have much interest in older movies. But if the old movies were in color, the owners reasoned, they'd be more accessible to modern audiences. Or at least colorization was enough of a novelty to draw viewers curious about the "new look."

Trouble was, the new look was awful. The process wasn't sophisticated enough to produce truly realistic-looking color. Criticism was particularly harsh for the treatment of black actors, who often ended up the same color as wood tabletops.

And even if the process had been better than it was, the whole idea was still problematic. Some black and white movies from the 1930s and 40s would probably have been shot in color if the option had been available. Others, however, were deliberately shot in black and white to achieve the visual effect the director wanted.

Debate raged in classrooms and boardrooms. When Congress held hearings on the subject, the owners backed off and reduced or eliminated their colorization efforts.

And what happened to *Citizen Kane*? When the movie was originally made, director Orson Welles feared interference from the movie's fictionalized target, William Randolph Hearst. So he made sure his contract with the studio specified that the movie couldn't be altered in any way without his consent. Thus Turner never had the right to colorize it to begin with.

Shaky cam

One of the great enigmas of filmmaking is that often making a movie look bad is the best way to make it look good. Shooting with substandard-quality film, cutting awkwardly and using other "amateur" techniques can help distance pictures from the well-crafted, slick and – some say – dishonest world of Hollywood blockbusters.

Directors going for such a rough look and feel frequently resort to a technique nicknamed "shaky cam." Shooting using a handheld camera without a tripod or a dolly makes the image bounce around, looking "shaky." The idea is to give the picture a "documentary" appearance, as if the visuals were shot as a spur-of-the-moment reaction to a spontaneous event rather than carefully-planned footage of a scene arranged in advance.

The technique is particularly common in low budget horror movies such as *The Blair Witch Project*. On one hand, it's an easy trick to pull off. And it usually achieves the result the director is after. On the other hand, some critics argue that the technique has become so over-used that now it's a cliché.

Further, for better or worse, shaky cam can produce undesirable physical effects in some audience members. When our eyes tell us we're moving but everything else in our bodies tells us we aren't, the disconnect can cause nausea (sort of like seasickness only in reverse). Screenings of *Cloverfield* in AMC theaters were accompanied by warnings that the picture might make some viewers ill.

Movies and truth

French new wave filmmaker Jean-Luc Godard once remarked that “the cinema is truth at 24 frames per second.” No other medium combines visual and audio reproduction of the “real world” in such a larger-than-life presentation. Epic space battles, elaborate musical numbers and other elements we know can't be objectively “real” nonetheless impress us as somehow “true.”

Thus some critics argue that anytime filmmakers tackle an actual, historical subject that they need to be particularly careful about sticking to the facts. *Amadeus*, a movie about the rivalry between Wolfgang Mozart and fellow composer Antonio Salieri, drew critical fire for not sticking strictly to what historians know – or at least strongly suspect – about the two men. The movie's creators replied that their work was intended to explore genius and envy as general human traits rather than to present the biographies of specific individuals.

The issue is even more divisive when not everyone agrees about the truth. Oliver Stone's *JFK* ignited a storm of criticism, some of it downright vicious, for questioning the government's “official” version of the facts surrounding the assassination of John F. Kennedy. One of the “problems” was the director's decision to blend actual, historical footage with dramatic re-creations.

Industry self-regulation

The Hays Code

“Movies are immoral. They present scandalous material that tends to corrupt everyone who watches them.” The criticisms are as old as the movies themselves. Whether justified or not, the studios must deal with them nonetheless.

In the early 1930s, the anti-movie movement was particularly strong. Thanks to sound technology and the Great Depression, movies were an immensely popular entertainment medium. Risqué content onscreen and scandals behind the scenes gave moral crusaders all the ammunition they needed to attack the industry. Further, the Supreme Court had ruled that movies weren't protected by the First Amendment (a decision that was later reversed).

In order to head off government regulation, the movie studios set up a system of self-censorship called the Hayes Code. The code was named after Will Hays, the head of the Motion Picture Producers and Distributors of America (the studios' industry association).

In 1934 the Production Code Administration began enforcing the rules. Studios weren't allowed to make movies that violated any part of the code. As a result, several big Hollywood movies underwent significant change during the planning stages in order to prevent them from being blocked by the PCA prior to distribution.

Some of the rules were obvious stuff: strict limits on nudity and graphic violence. Drug and alcohol abuse were forbidden, and crime couldn't be depicted unless the criminals were defeated by the forces of law and order. The code also prohibited even mild profanity.

A few of the rules caused problems, such as the requirement that "prominent people and citizenry of other nations shall be represented fairly." When Warner Bros. started making anti-Nazi movies prior to World War Two, pro-German groups argued that they violated the Hays Code.

And some of the rules seem completely bizarre by modern standards, such as the rule against interracial relationships.

The MPAA ratings

By the mid-1960s, the movie industry was forced to recognize that the old Hays Code wasn't working anymore. Hollywood faced ever-increasing competition from independent producers and foreign filmmakers who weren't bound by the code. Society's morals had changed a bit over the past three decades, rendering some of the rules counterproductive if not completely obsolete. And worst of all, many Hollywood producers were making movies that openly violated the code without suffering repercussions from the enforcement office.

Recognizing the need to make a change, in 1968 the Motion Picture Association of America (the new name of the MPPDA) replaced the Hays Code with the rating system in place today. Or at least more or less the same system; the ratings have been "tweaked" a little over the years.

Unlike the Hays Code, the new system didn't ban movies for rules violations. Instead, it was designed to stick a label on each new release that parents could use to determine whether or not it was appropriate to let their kids go see it (or in the case of an R or NC-17 movie, to keep some or all kids out of the theater).

Though not imposing outright bans, the Classification and Rating Administration nonetheless wields a lot of power in the movie industry. If a movie gets an R rather than a PG-13, it automatically loses a good-sized chunk of the 16-and-under audience (though it may pick up other viewers who regard PG-13 movies as "too tame"). An NC-17, on the other hand, can be a kiss of death. Many movie theater chains won't screen pictures with the "adults only" rating, and some video retailers won't stock them, either.

Law

The First Amendment and free speech

The Hollywood Ten

During the Red Scare in the 1950s, anti-Communist forces in the government singled out the media as major targets for blacklisting. Anyone with Communist ties or even leftist leanings could find themselves fired from their jobs and unable to find new work.

In Washington, the House Un-American Activities Committee began a “witch hunt.” It issued subpoenas to many people in Hollywood ordering them to appear before the committee and testify. The committee expected them not only to admit their own Communist ties but also to identify other people who might also be Communists.

The HUAC was inconsistent in its handling of its victims. Some testified honestly that they weren’t Communists and didn’t know of anyone who was. In some cases that was enough, but in others the person ended up on the blacklist anyway.

Ten screenwriters and directors who appeared before the committee refused to testify, citing their Fifth Amendment right not to incriminate themselves. Unimpressed, the HUAC had the “Hollywood Ten” thrown in jail for contempt of Congress. Even after they were released, for some time they had trouble finding work. Like other people on the blacklist, the only way they could make a living at their craft was to hire “fronts,” non-blacklisted people who pretended to be the authors of scripts actually written by people on the list.

Lawsuits and the courts

Coming to America

In 1988 Paramount Studio released *Coming to America*. Starring Eddie Murphy and directed by John Landis, the movie told the story of an African prince who traveled to the United States in search of freedom from his family and an arranged marriage. Though the picture wasn’t a creative or financial high point for anyone involved, it was a moderately successful comedy.

Then it became the subject of a lawsuit.

Washington Post columnist Art Buchwald originally sold the idea for the movie to Paramount six years earlier. The studio later decided to abandon the project but then went ahead and shot the movie anyway. Murphy was given sole screen credit for the story, and the studio didn’t pay Buchwald a dime. So he sued for breach of contract.

Here’s where it really gets fun. The studio claimed that even if Buchwald was the story’s original author, he still wasn’t entitled to any money. The contract between the studio and the writer entitled him to payment based only on “net profit.” And the movie hadn’t turned a “net profit” based on the contract’s definition, even though it earned nearly \$300 million at the box office.

Buchwald's lawsuit exposed the movie industry's bizarre accounting practices, which the court called "unconscionable" when it found in favor of Buchwald.

Though he sought nearly \$6.2 million in damages, the court awarded him only \$150,000 (small compensation given that he'd already spent more than \$200,000 on legal fees). For its part, Paramount dropped nearly \$3 million on attorneys' fees. So other than the lawyers, nobody really won.

Government regulation

The Kansas Film Board

Once upon a time, many states had their own movie censorship boards. When movies first started gaining widespread appeal in the 1910s, state governments reacted by setting up boards to regulate movies in the name of public morals.

Though some states had lenient boards (or no boards at all), Kansas was notorious for having one of the strictest boards in the nation. Even something as simple as a scene in which characters danced could end up with thick black bars placed across the picture. And of course anything more risqué than that was cut out altogether.

This created problems for distributors. Coming up with different versions of their products for different states was a pain. And once "talkies" hit the market, cutting a scene from a movie meant that the visuals wouldn't be in sync with the audio on the accompanying disc.

Though some distributors went along with the rules, others resisted. After the board banned *The Outlaw* from Warner Bros., the studio refused to let any of its other movies be shown in Kansas. And some smaller distributors sidestepped the law by cutting their movies down in order to earn the card required before movies could be shown in the state and then shipping the original, uncut version to theaters.

Then in 1954 the U.S. Supreme Court dealt a blow to state film boards throughout the country when it ruled that movies were protected by the First Amendment and could only be banned if they were legally obscene. Though the Kansas board continued operating for another dozen years, it no longer had the power to censor movies for the long list of reasons it used to use.

Television

The almighty box

Like the Internet, television's one of those things you already know at least something about. Unless you were raised by wolves or hippies, you probably grew up with television. Indeed, for the last two or three decades we've been so preoccupied with the debate about whether television is a good parent or a bad parent that we've stopped asking whether television should be a parent at all.

For better or worse, television plays an important part in our lives. In its early days it took over the roles previously played by other media. Unlike radio, it had pictures. Unlike movies, you could watch it at home. Unlike magazines, it was immediately up-to-date. And unlike those last two, it was free.

The medium has changed significantly over the years. It started with just three channels, but now thanks to cable (and other multichannel services such as home satellite dishes) subscribers have access to hundreds of choices. By offering so many options, television has in some ways become its own biggest competitor.

Because the "idiot box" plays such a large role in American culture, the medium's development and operation have a lot to teach us about who we are as a society.

History

Key moments

Setting the standard

Unlike radio, television signals are complicated things. Audio transmission is a matter of sending a sound vibration from one point to another, a fairly natural task for radio waves to perform. Video, on the other hand, needs images to be broken into parts, encoded into waves, transmitted and then decoded for display on the receiving end.

And therein, as they say, lies the rub. Competing companies came up with different ways to code and decode images. As the systems were all mutually incompatible, early TV developers envisioned a nightmare world in which broadcasters had to send out a host of different signals just to make sure everybody's sets could pick them up.

To avoid such an obvious waste of resources, the FCC set up the National Television System Committee in 1940. A year later the committee issued a single standard for black-and white TV signals, a compromise between a system already in use by RCA and proposals from rivals Philco and DuMont.

Then the battle over color TV started. The first color system adopted by the NTSC was a “color wheel” device developed by CBS. However, the new standard suffered from some serious drawbacks, not the least of which was that it wasn’t compatible with the older black and white standard (meaning that new color broadcasts couldn’t be watched on older TV sets). The system was swiftly scrapped in favor of a new standard developed by RCA.

All this squabbling over standards took too long and not long enough. The fight hampered the growth of television as a mass medium, making it take as much as a decade longer than it probably should have. On the other hand, the system finally adopted by the NTSC in the United States (as well as in most of North and South America, Japan and a handful of other countries) was inferior – at least in terms of picture quality – to the PAL and SECAM systems adopted by most of the rest of the world just a year or two after the NTSC standard was officially carved in stone.

The quiz show scandal

Charles Van Doren had it all. He was the latest academic success in a long line of writers and teachers. He had a comfortable position teaching at his alma mater, Columbia University. And best of all, he had an incredible winning streak on a TV quiz show called *Twenty One*. His amazing ability to answer even the most difficult questions netted him nearly \$129,000 (more than a million bucks today).

Oh, and one other thing: he had all the answers to all the questions. In advance.

The show’s producers noticed that people watched in much greater numbers when a contestant was on a winning streak. So they made sure such streaks occurred, fixing the game by providing one of the two competitors with the answers. Van Doren’s telegenic appearance and scholarly demeanor made him the perfect quiz show celebrity, which contributed in no small part to the help he got and the ratings the show drew.

Not as happy about the turn of events was Herb Stempel, the guy who’d been riding the *Twenty One* rigged answer gravy train before being replaced by Van Doren. He spilled the beans to anyone who would listen. At first he was dismissed as a sore loser. But as more and more information came to light about fixing not just on *Twenty One* but on several other shows as well, the public started to pay attention.

The resulting scandal had three immediate effects. First, the law stepped in. Prosecutors failed to make court cases against the shows, at least in part because the law didn’t specifically prohibit the production of rigged quiz shows. After holding widely-publicized hearings (at which both Stempel and Van Doren testified), Congress passed a law prohibiting airing of games “with intent to deceive the audience.”

Second, TV show financing structures changed radically. In the early days of television, shows were typically paid for by a single sponsor. Rather than interrupt the program with commercial breaks, the sponsor’s products were worked directly into the show. On *Twenty One*, the host would pause between rounds to mention Geritol, the company paying the bills. But by the mid 1950s, production costs had grown enough to make it hard for just one company to pay the whole price.

The quiz show scandal was the final nail in the coffin of single-sponsor financing. In its place networks sold ad spots, dividing costs up among several companies and reducing the pressure on everyone involved.

And just as the *War of the Worlds* broadcast had done with radio a couple of decades earlier, the scandal shook public faith in the medium. Many viewers felt duped by the rigged games, and trust in television never fully recovered.

Signing off

Here's a quote you don't hear much anymore: "This concludes our broadcast day." In the 21st century, most broadcast stations and cable channels run programming 24 hours a day, seven days a week. Even in the middle of the night on Sunday.

Just a couple of decades ago, however, many TV stations went off the air, typically wrapping up their broadcasts sometime around midnight in the central time zone. Sign off procedure varied from station to station, but the last few minutes every day typically included a quick news summary, promotional video showcasing station employees and other behind-the-scenes images, a quick prayer and a patriotic music video of the Star Spangled Banner. A minute or so of a test pattern (bars of color and an annoying tone). Then the signal switched off, leaving nothing but static.

Even HBO used to shut down at the end of the day. However, cablecasters were more likely to share their channels rather than shut down entirely. Nickelodeon's target audience members tend to go to bed by 7:00 or 8:00. Rather than show kiddie cartoons to adult insomniacs, the channel's spot on the cable box was typically taken over by another half-day-only channel at night. Eventually MTV (Nickelodeon's parent company) established Nick at Nite specifically to fill the gap. Though they're owned by the same company, share a space and part of a name, they're considered two different channels for purposes such as ratings calculations.

Critics debate whether the death of the sign-off was a good or bad thing. Additional programming time is generally a good thing. But what's worse: dead air or the relentless parade of infomercials that occupy the airwaves in the wee hours of the morning?

Community antenna

In its earliest incarnation, "cable television" provided nothing but signals from over-the-air broadcast stations. The trick was that they supplied them to people who couldn't receive them otherwise. If you lived too far away from a city with a TV station or if a mountain or a few blocks of tall buildings stood between your home and the transmitter, you couldn't receive the signal on your own. But if you wanted to watch TV bad enough, you could climb up to the top of that signal-blocking mountain, set up an antenna and run a cable back down to your house.

Then of course your neighbor sees that you have a working TV set, so he starts coming over and bringing his family every night. After awhile you get tired of this, so you politely ask him to buy his own set and offer to hook your cable up to his house as well.

That's fine if it's just you and the guy next door, but when the whole town starts asking to be hooked up, you start seeing this as a moneymaking operation. So everyone who connects to your cable has to pay you a monthly "subscription fee," and you become the local **head end**.

That's Community Antenna TV, and it's the first important step toward cable television as we know it today. Of course the next step was to provide content beyond over-the-air stations, such as superstations from distant cities and eventually premium services and other cable-only channels.

Key players

Inventor of soaps

Ina Phillips invented the soap opera. Seldom if ever has one individual had such a large role in the creation of an entire programming category. Starting on radio and then moving to television, she pioneered the first programs aimed directly at housewives, a huge, untapped market at the time.

Phillips developed her first "serial drama" – *Painted Dreams* – for radio station WGN in Chicago. Like much of her early work, the shows were designed to run for 15 minutes and featured mostly female characters. Her stories tended to progress slowly (so audience members wouldn't miss anything if their babies started crying in another room), and she came up with the idea to end episodes with a "cliffhanger" so people would tune in again for the next installment.

She created 19 different shows for radio and television, including *As the World Turns* and *Days of Our Lives*. One of her most famous creations – *The Guiding Light* – began on radio in 1937, moved to television in 1952 and ran continuously until 2009, making it the longest-running drama in broadcast history. In her heyday, Phillips wrote more than two million words worth of scripts per year. She acted out her scenes – playing all the parts herself – while an assistant wrote everything down.

Phillips was strongly attached to her work, learning early on to retain all the ownership rights to the shows she created. Her shows tackled controversial issues such as abortion and the emerging roles of women in the workplace. When CBS network censors refused to allow her to include an interracial romance in the serial version of *Love Is a Many-Splendored Thing*, she quit the show.

President of the "Tiffany Network"

Early on, William S. Paley had a vision of broadcasting's future. At the ripe old age of 26 he assumed control of a small network of 16 radio stations. In less than a year the family made enough money to buy majority control of the network, the Columbia Broadcasting System.

Paley's scheme for making money with his new network was brilliantly simple: stop charging affiliates for programming. The less the shows cost, the more stations would

carry it. And the more stations that carried CBS's shows, the more people tuned in. And the bigger the audience, the more the network could charge for advertising.

The second part of the Paley plan was to improve program quality in order to draw more listeners. The jewel in the new CBS crown was its news division, its reputation for excellence in news coverage backed by Paley's personal friendship with legendary reporter Edward R. Murrow.

The network continued its emphasis on advertising and quality programming when it made the move to television in the late 1940s. During the postwar economic boom CBS matched and then surpassed NBC, the broadcasting rival that dominated radio for decades.

That isn't to say that everything CBS ever came up with was completely crap-free. In 1959 Paley stepped down as company president, though he retained control as chairman of the board. The network maintained the quality of its news division, despite occasional bumps in the relationship between management and journalists. But some of the programs on the entertainment side were a bit more "low brow" than previous offerings. Though shows such as *The Beverly Hillbillies* and *Gilligan's Island* weren't exactly high water marks in American cultural history, they were a big part of CBS's dominance of the ratings in the 1960s. Indeed, between 1955 and 1976 the network consistently led the competition for viewers.

Uncut movies from outer space

The Home Box Office network started up with a gamble: founders Charles Dolan and Time Life bet that people would be willing to pay for television – particularly movies and sporting events – shown uncut and commercial-free. The network's programming and innovative early use of satellite transmission made it an immense commercial success and model for many standard practices in cable and broadcast television.

The network began life as a CATV operation in Manhattan, where tall buildings made it difficult to receive TV signals. However, the service quickly expanded to include uncensored movies and New York area sporting events.

HBO expanded to other markets as well, and on September 30, 1975, it became the first TV channel to deliver a continuous signal via satellite, beginning with the Ali-Frazier "Thrilla in Manila" boxing bout.

The use of a satellite was an important innovation. The broadcast networks sent their signals to their affiliates via a huge, expensive series of dedicated lines and microwave transmission towers. Satellites aren't exactly cheap, but they cost a lot less than a set of wires and towers spanning the entire nation. By using satellites, HBO was able to send its programming all across the country without spending an impossible amount of money.

In the early 1980s the network expanded its offerings to include original programming such as the popular kids' show *Fraggle Rock*. In recent years HBO has become well known for original shows such as *Oz*, *The Sopranos*, *The Wire*, *Sex and the City* and *True Blood*.

TV history “twofer”

Most folks on the “key players” list are there for one particular area of accomplishment. Ted Turner, on the other hand, was largely responsible for not one but two major advances in cable television.

In 1969 he took funds from his family’s highly successful advertising business, sold a few radio stations and blew the money on a total boondoggle: a UHF TV station in Atlanta. U’s were considered bad investments, as they were harder to access and generally not as popular as VHF stations.

Seven years later Turner’s cut-rate station had a couple of banner moments. It had been broadcasting Atlanta Braves baseball games for three years, and in 1976 Turner managed to actually buy the team. But more than that, the FCC cleared the way for the station to start using satellites to send its broadcasts out to local cable systems across the country. This made the station (later re-call-signed WTBS for Turner Broadcasting System) the first “super station.”

The move drastically increased the number of viewers watching WTBS’s programming. It also helped build a bigger fan base for the Braves. At this point Turner could have just built a Scrooge McDuck money pool in his basement and gone swimming for the rest of his life.

Instead, he used a chunk of his funds to start history-making moment number two: the Cable News Network. CNN was the world’s first all-day-every-day news source, and it permanently changed the way news is covered. It also spawned spin-off networks, some more successful (Headline News) than others (CNN/SI, a sports network that never quite seemed to escape the shadow of ESPN).

That wasn’t exactly the end of Turner’s story, either. He started other cable channels (TNT and the Cartoon Network), bought the MGM/UA movie studio, and eventually merged Turner Entertainment with Time Warner.

The O

Oprah Winfrey is the producer and star of the most successful program in syndicated television history. She turned what started as a small “chat” show into a multimedia empire, which made her one of the richest people in the business.

After a rough start in broadcast journalism, Winfrey’s career began to take off when she took a job as host of *AM Chicago*, a low-rated morning talk show. In less than two years the show went from last to first place in the ratings, was renamed *The Oprah Winfrey Show* and (best of all) was picked up by King World for national syndication. Her personal style and Oscar-nominated performance in *The Color Purple* helped her swiftly develop a strong national following.

She encouraged guests on her show – celebrities and “real people” – to open up and share their personal experiences, good and bad. She was also famous for “gimmicks” such as “Oprah’s Favorite Things,” in which she would give away products (some as valuable as

cars and vacations) to all the members of the studio audience. And her “Oprah’s Book Club” episodes were legendary in the publishing industry for their ability to transform a book into an instant best seller.

She was also famous for tackling serious social issues. In the early days of her show she told audience members about her history as a victim of sexual abuse, a theme she’s returned to many times in the various media she produces.

In addition to her talk show, Winfrey is also the creator of *O, The Oprah Magazine*, OWN (The Oprah Winfrey Network), Oprah.com and Oprah Radio.

Winfrey is also well-known for her philanthropy. Oprah’s Angel Network provides millions of dollars in aid to nonprofit organizations across the nation and around the world. She also uses her media influence to draw public attention to problems and controversies.

Her influence and her income have led many critics to describe her as one of the most important people in media history.

Role in society

Television vs. McCarthy

In the wake of the Second World War, two superpowers emerged: the United States and the Soviet Union. In short order a Cold War erupted between the two, during which no shots were directly fired but great distrust reigned abroad and at home.

Taking advantage of the “red scare,” Senator Joseph McCarthy led a crusade to blacklist Communists, making it impossible for many people with leftist leanings to find work, especially in the media.

By 1954, however, a backlash began to develop against the blacklist. On March 9, Edward R. Murrow, a journalist popular with audiences from his legendary radio coverage of World War Two, used his television news show – *See It Now* – to criticize McCarthy’s tactics. A week later he did another show focusing on McCarthy’s House Un-American Activities Committee’s attacks on a woman who worked as a clerk for the Army. McCarthy appeared on *See It Now* on April 6 to argue with Murrow, but the senator’s wild accusations and bullying demeanor cost him a lot of public support.

Unfortunately for McCarthy, he’d recently picked a fight with a much larger foe than Murrow: the United States Army. Claiming the Pentagon was full of Communist spies, he called for Congressional hearings to investigate. Sensing that the senator had finally bitten off more than he could chew, the broadcast networks heavily covered the hearings. ABC carried the proceedings “gavel to gavel” (the first time a major network ever preempted days of normal programming in order to televise the government in action), while CBS and NBC devoted significant news time to showing the highlights.

The highlight that showed McCarthy at his “best” was a tense argument between the senator and Army lawyer Joseph N. Welch. When McCarthy (in violation of a pre-hearing agreement) accused one of the young lawyers in Welch’s firm of being a

Communist, Welch let him have it: “Let us not assassinate this lad further, Senator. You’ve done enough. Have you no sense of decency, sir? At long last, have you left no sense of decency?” The exchange made McCarthy look like the bully he was, and a national audience saw the whole thing.

Though McCarthyism continued on for awhile after that, the “red scare” would never again hold as much control over the country as it had before McCarthy made enemies of the Army and the television networks.

Technology

Origins (the nerd stage and beyond)

TV’s two fathers

In the summer of 1921, Philo Farnsworth invented television. He was 15 years old at the time.

As we’ll see when we get to the how-it-works section, broadcasting a picture is tricky business. Several attempts had already failed completely or proven so cumbersome that they weren’t much better than total failures. An actual, working solution occurred to Farnsworth because he was a farm boy. Breaking an image down into lines was based on the back-and-forth motion farmers used to plow a field.

Of course a kid from rural Idaho wasn’t the only person in the world trying to come up with a way to make television work. While Farnsworth struggled for years on his own, inventor Vladimir Zworykin was being paid by Westinghouse (one of the largest electronics companies in the world at the time) to develop a marketable TV system. The two men came up with similar ideas at more or less the same time.

Later Westinghouse sued Farnsworth, claiming that their employee Zworykin invented the system first. Farnsworth was able to beat the huge corporation in court at least in part because his old high school science teacher testified – supported by a drawing he’d done – that Farnsworth’s idea predated Zworykin’s work.

Videotape

Just as breaking a picture down into a signal wasn’t the easiest trick in the book, recording TV transmissions also proved tricky. Thus in the early days of television everything was done live, resulting in all kinds of on-air “bloopers.” The only way these broadcasts were saved was by pointing a movie camera at a screen and filming it.

The first videotape machines were cumbersome beasts, playing tape that was two inches wide. The huge tape was necessary to get all the complex picture information stored. Technical improvements shrunk the recording heads down a bit, and technicians came up

with the idea of recording the signal sideways on the tape in order to bring the size down still further.

In the mid-1970s Sony came out with Betamax and JVC countered with VHS, the first commercially-successful videocassette systems for home use. VHS eventually won the “format war,” spreading to homes across the country and beginning a massive change in the television industry.

Home video allowed audiences to “time shift,” moving shows from when they were broadcast to when folks actually wanted to watch them. And if none of the broadcast or cable channels was showing anything worth watching, consumers could take a trip to the local video store and rent or buy a movie or other program of their choice. Thus viewers were liberated at least in part from the control of the networks.

How it works (the state of the art)

NTSC – the old standard

Radio’s inventors had it easy. Sounds are vibrations in the air, so it wasn’t too terribly difficult to turn them into electric vibrations for broadcast. Images were a whole other story. You can’t exactly wad up a picture and cram it into a wire.

The method that worked the best was to split the image up into lines. This allowed the picture information for each individual line to be sent as a single broadcast, with “kick” signals at the end of each line to tell the cathode ray guns inside TV picture tubes when to move to the next spot and start the next line. Then at the end of one screen’s worth of picture, another kick told the television to go back to the start and begin creating the next image.

As a concept, this works great. But problems can arise in the details. How many lines should one picture be made of? And how many pictures per second should the signal include? Small changes in the answers to such questions can make a big difference in the quality of the TV picture.

Further, a signal designed with one system in mind can’t be viewed on a television set up for a different system. In the “nerd stage,” every manufacturer had its own mutually incompatible system. In order to avoid the consumer nightmare of buying a TV set that would only receive broadcasts from the manufacturer, the United States adopted the NTSC standard, which had 525 lines and 30 frames per second. Thus any U.S. television set can pick up any U.S. television signal. However, an NTSC set can’t “unscramble” a signal intended for a PAL or SECAM receiver.

HDTV – the new standard

At this point in our nation’s history, a lot of broadcast television still uses the NTSC standard that’s been around since the 1940s (though transmission switched from analog

to digital in 2009). But the conversion has begun to a newer system with better image quality: High Definition Television.

HDTV has more lines of resolution than the old NTSC standard (1080, more than double the old system's 525). It also has longer lines, resulting in a wider aspect ratio (16:9 as opposed to the boxy 4:3 of NTSC pictures). The new system still sticks close to the old frame rate, which makes it easier to convert movies from film to video.

The new standard is slowly making its way into the various distribution channels established by the older system. The first over-the-air HD broadcasts in the United States began in 1996, and now most stations transmit in both the old and the new standards. Cable and DBS systems compete with one another based on how many HD channels they have (and how much they charge for them). And on disc, Blu-ray is to HD what DVDs were to NTSC.

Discs

Question: how do you get more than 1400 feet of videotape onto a single disc? Answer: compression.

VHS tapes had a lot of disadvantages. They were clunky, taking up a lot of storage space. They had a tendency to get tangled, broken or otherwise ruined. Even the ones that didn't break eventually started to lose picture quality. They didn't do a lot of fancy disc tricks such as jumping instantly to a precise point in the middle of a movie. But in their favor, they recorded every bit of the program's picture.

The vast amount of information required to show an entire movie-length program fits on a single DVD-sized disc only if the images are "simplified" by compression routines. For example, if a movie ends with an all-black screen with "The End" in small type in the middle, a VHS tape has hundreds of lines of nothing but black. But a DVD breaks this down into digital instructions roughly the computer equivalent of "this screen is black except for the words in the middle."

For simple images – especially high-contrast pictures or shots with distracting elements such as rapid action – the difference isn't noticeable. But the next time you're watching a DVD of a movie with a foggy scene, pay attention to what you're seeing. Often the compression will cause jagged "pixel-ish" patterns in what should be a smooth bit of fog.

For the most part, however, compression is a small price to pay for the advantages discs offer over older technology.

Satellite

Ever wonder why satellite dishes (at least the ones designed to pick up TV signals) all point south? Easy answer: that's where the satellites are.

Communication satellites have to be placed in geosynchronous orbit, which means that they go around the Earth at the same rate the planet turns, always staying "parked" above the same spot on the ground below. The only place a satellite with a circular orbit will

always remain geosynchronous is directly above the equator, which of course is south of all locations in the Northern Hemisphere. That's why dishes point south.

Satellite transmissions start from a single location called an **uplink**. These spots can be anywhere the uplinking dish has an unobstructed shot at the satellite. CNN's signal starts from Atlanta. ESPN originates in Bristol, Connecticut. And so on.

The signal hits the satellite, where a device called a **transponder** re-sends it back down to Earth. Anyone with a dish aimed in the general direction of the satellite can pick up the signal (though of course cablecasters scramble their signals so you can't just buy a dish and get cable for free). Direct Broadcast Satellite subscribers get their programming directly from outer space, while cable systems **downlink** satellite signals at their head ends and then re-send them to subscribers via cables.

Workflow in the workplace

Venues

What kind of programming you can expect from a TV channel depends to a large extent on what kind of channel it is.

Over-the-air TV broadcasters are divided into two categories: Very High Frequency and Ultra High Frequency stations. Technically the difference between the two isn't great. But for decades TV receiver construction caused a huge rift between **VHF** and **UHF** stations. Sets were designed to tune in VHF broadcasts (channels two through 13) with ease, going right to them with the click of a dial. Tuning in a UHF, on the other hand, required a different dial that required careful adjustment to get a static-free picture. Because watching a U required a delicate hunting expedition, people tended to watch the Vs.

As a result, the limited number of VHF channels tended to go to broadcasters with a lot of money (i.e. network affiliates). The UHF bands became the domain of PBS stations, religious broadcasters and stations that specialized in syndicated reruns and other relatively cheap programs. This system remained in place until cable became popular in the 1980s. On a cable box, every channel is as easy to tune in as any other.

Speaking of cable: multichannel distribution systems (cable and Direct Broadcast Satellite) tend to package their programming in **tiers**. All subscribers get a "basic cable" tier that typically includes local broadcast channels and a handful of popular cable channels such as CNN and ESPN. For an additional fee, subscribers can get a second (or even a third) tier that typically includes high band (so called for their locations higher up on the channel listings) stations designed to appeal to narrower interests.

And of course multichannel systems generally offer premium packages such as HBO and Showtime. Because these channels are only available to subscribers who pay extra for them, they're able to show movies and other programming with no commercial interruptions and no "edited for television" cuts.

Some critics have suggested (to Congress and elsewhere) that cable companies should supply channels “a la carte,” allowing consumers to pay for and receive only the channels they actually want. However, the cable industry argues that this practice would actually drive up subscription costs by dividing the market for individual channels.

Industry

How the industry makes money

Show types

Networks and show producers tend to try to lure viewers based on show types, which tend to provide the product standardization and differentiation audiences need.

For many years the most popular show type was the **sitcom** (short for “situation comedy”). Designed to run in half-hour time slots, these shows typically started with a basic premise (Cuban bandleader with ditzy wife, conservative parents sharing a house with their liberal daughter and son-in-law, a group of friends facing challenges living in New York, and so on) and let the characters’ situations generate the humor. Many of these shows are domestic comedies, centering on members of families (traditional or otherwise).

In the 1950s and 60s, variety shows (combinations of comedy and musical acts) dominated network prime time schedules. Eventually these gave way to other show types. However, **sketch comedies** such as Saturday Night Live preserve at least some aspects of the old variety programs.

Hour-long dramas are generally divided into two categories. **Chapter shows** are popular with producers because they’re easier to syndicate. Indeed, the original *Star Trek* was an initial three-season failure. But because it was divided into chapters – recurring characters in complete stories told from beginning to end in a single episode – it was attractive to stations looking to air reruns that didn’t necessarily have to be shown in order.

On the other hand, episodes in a **serial program** have to be watched in order. If you tried to watch a season of *24* (in which the story takes place in “real time” with every episode covering one hour of the characters’ day), you’d be completely lost if you started in the middle somewhere. Great for drawing a network broadcast audience, but not so hot in syndication.

In the early 2000’s – for the first time ever – sitcoms began to slip out of the top ten ratings list. In their place arose **reality shows**. This new breed of program was popular with audiences, because apparently people really want to know just how many bugs a person will eat to win a prize or how mean a judge can be to someone who can’t sing. They were also immensely popular with show producers, because they didn’t require writers or actors. Lower costs meant lower risks and higher profits.

Birth, life and death

Like everything in the universe, TV shows have a life cycle. For shows with scripts and actors, life tends to begin with a pilot. Producers shoot a sample episode they can show to networks to help them find a spot in a broadcast or cablecast. And if a show is “picked up,” the pilot is often the first episode audiences see. With luck, it impresses viewers as much as it impressed network executives.

If not, it dies a quick death. But if it draws enough viewers to keep it alive for at least 13 episodes, a couple of things happen. First, the network has to order more episodes (13 is the usual initial order for a new show). And second, producers and writers need to start thinking about keeping the story going by introducing new characters, plot complications or other elaborations on the original theme.

Critics disagree on exactly how long a show can reasonably be expected to keep its characters and story lines fresh. Some say three or four seasons, while others argue that six or even seven seasons aren't completely out of the question. And of course it varies from show to show based on the strength of the premise and the talent of the writers. But sooner or later every show begins to decline in quality.

Some shows die when they fall out of favor with audiences. When people stop watching, advertisers stop paying for ads, and that's almost certain death. But some shows that still attract viewers die anyway. Sometimes death results from actors who demand more money than producers are willing to pay. But on occasion even a popular show with happy actors ends its run because someone (usually the producer) simply feels that the show has gone as far as it's going to and that additional seasons would cause an unacceptable decline in quality.

First run and syndication

Several times so far I've mentioned the word “syndication,” so we need to pin down exactly what that means.

Back when NBC, CBS and ABC dominated the television industry, shows started their lives as **first-run** network programs. These worked then pretty much as they do now: the network broadcasts new episodes and possibly re-runs them during slow periods in the summer.

If a show makes it to 100 episodes, that makes it a candidate for **off-network syndication**. The show's owner can sell old episodes to the highest bidder (whether or not the station is affiliated with the network that broadcast the program to begin with). A set of 100 episodes allows the show to be **stripped** – run at the same time of day five days a week even though it originally ran once a week – without repeating episodes for 20 weeks.

If a show lives for years and years in off-network syndication, it can achieve **evergreen** status, an informal indication that the show's been around for a really long time.

Some shows never run on the broadcast networks at all. If they're created by an independent producer and then shopped to the highest bidder, they're **first run syndication** shows. Some of television's biggest success stories – including The Oprah Winfrey Show – have been first-run syndicated programs.

In the multichannel world, it's also quite common for shows to run as **cable originals**. These work like first-run network shows, but they're produced for cable channels rather than for broadcast networks. And like their broadcast counterparts, they can end up in syndication as well (even original programming for premium channels, though these shows sometimes require some content editing to tame them down for broadcast or basic cable channels).

Ratings

Most broadcasters and cablecasters depend on ad revenue to stay in business. Thus they have to convince advertisers that potential customers watch their programs. For proof of audience size, the industry turns to ratings reports generated by the A.C. Nielsen Company.

A show's **rating** is the percentage of all households in a market watching a particular channel on a particular day at a particular time. For example, if a quarter of all the households in the United States are watching *60 Minutes* on Sunday evening at 6:00, then the show's rating for that day and time is 25.

Ratings are calculated based on households rather than individual viewers, a practice that dates back to the days when homes tended to have only one television and the presumption was that if the TV was on then most family members were watching it. They're calculated not only for the country as a whole but also for specific markets, which is good for local stations doing business with advertisers who are interested in particular cities rather than the whole nation.

Nielsen also uses **HUT** (Homes Using Television) to calculate **share**. This stat measures the percentage of households that are actually watching television at the time rather than the market as a whole. Share is helpful for stations to tell how they stack up against the competition, but ratings are generally more useful for determining and comparing audience sizes.

The company monitors viewing year-round, but during four months of the year (February, May, July and November) Nielsen increases monitoring activities. These months are called sweeps, and advertisers pay close attention to the numbers from sweeps periods. Because broadcasters know their audience sizes during sweeps are particularly important, they tend to schedule programs that will glue viewers to their sets. Ever notice that one of your favorite shows tends to go through slow periods when not much happens and then fast periods with lots of action and attention-grabbing cliffhangers? Often this ebb and flow has a lot to do with the month the episodes originally aired.

Advertising

Running ads on television is an expensive business. A 15-second spot on a popular network show can cost hundreds of thousands of dollars, and “big ticket” broadcast such as the Super Bowl can cost millions per ad. With that much money on the table, advertisers like to make sure they’re getting their money’s worth.

Ad value is calculated by the **cost per ratings point**. So a \$100,000 ad on a show with a 20 rating would cost \$5000 per point. This calculation makes it easier not only to figure out a show’s “bang for the buck” but also to compare different ad purchases. For example, buying ads on two shows with a rating of 10 but a cheaper price tag of \$50,000 each would still be an overall cost of \$5000 per rating point.

Like the math involved, actually buying the spots can be tricky as well. If all you want is a handful of ads in a local market, you can buy them as “spot” purchases. The national networks, on the other hand, sell a lot of their ad slots during the **upfront**, a big meeting that takes place in New York every May. During the upfront, networks announce their upcoming fall schedules and offer advertisers the chance to buy spots based on their best guesses about what ratings are likely to be. Advertisers that don’t buy early can end up stuck with the scraps, spots that don’t deliver as many ratings points.

Narrowcasting

Once upon a time, television in the United States was the domain of three big networks: NBC, CBS and ABC. Other than a few small PBS and independent stations, that was it. Everybody watching TV had three choices. Thus the networks designed their programs to appeal to as broad an audience as possible.

Cable changed all that. Instead of three channels, now we have hundreds. And while some still try to appeal to general audiences, many cable networks focus on **narrowcasting**, aiming their programming at specific subgroups. Some strike a compromise between extremes (ESPN appeals to fans of many sports), while some get really specific (Fox Sports Kansas City or The Golf Channel, aimed at narrow demographics).

In a world with only three networks, narrowcasting would be financial suicide. But if consumers have hundreds of channels to choose from, many of those choices can afford to cater to narrow segments of the overall market.

Viewers like narrowcasting because it caters to individual interests rather than assuming that everyone in the world is willing to watch the same thing. The practice also appeals to cablecasters because it opens up tons of new advertising markets.

Pretend that you’re the ad manager for Iguana Treats, a company that specializes in pet food for lizards. Advertising on one of the “big three” (now of course the “big four” with the addition of Fox in the 1980s) isn’t an option, because you’d be paying way more than you can afford to reach millions of people who will never buy your product. But if the Animal Planet network starts a new program called *Those Amazing Iguanas*, the show could be ideal for you. Many (maybe even most) of the audience members would be

potential customers for your product. And because the overall audience isn't as huge as a broadcast network's, ad spots on the show are likely to be closer to your price range.

Who owns what

Ownership rules

Buying a broadcast station isn't exactly like buying a used car. For starters, most used cars don't come with multi-million-dollar price tags. But even companies with the cash to do the deal still find that a wall of regulation stands in the way. Rupert Murdoch, owner of NewsCorp and one of the world's wealthiest individuals, discovered that he had to become a U.S. citizen before he could legally buy U.S. TV stations.

In the early days of television, the FCC instituted the 7-7-7 rule, so called because it prevented companies from owning more than seven TV stations, seven AM radio stations and seven FM radio stations. Even when the rule later changed to 12-12-12, it still prevented a single company from owning stations that when combined reached more than 25% of the population.

This led to an unusual relationship between the three big networks and the stations that broadcast their programming. Each network owned a handful of stations – called O'n'Os for “owned and operated” – but most of the stations were actually owned by other companies and were merely “affiliates” of the network. Unlike the O'n'Os, affiliates could decline to carry some of the network's shows.

The Telecommunications Act of 1996 swept away the strict number limits on ownership, replacing it with a complex limitation on audience sizes. Now the FCC revisits the question once every four years, altering limits to meet current needs.

And of course no limits have ever been placed on the number of cable channels one company can own. As a result of deregulation and no-regulation-to-begin-with, the “big six” media companies have managed to consolidate ownership of much of the television industry.

Careers

In the corporate world

Jobs at TV stations

TV shows come from two sources: TV stations (and their big sisters at the networks) and independent producers. Stations and networks are generally responsible for programs such as news broadcasts, while independent producers create shows such as sitcoms and dramas.

Let's start with employment opportunities at TV stations.

Live broadcasts require a good-sized staff of people. Obviously the program needs on-air personalities (anchors for news, hosts for chat shows). News broadcasts typically require Electronic News Gathering teams, including reporters, camera operators and sound technicians. However, as media technology becomes easier to use, many stations are going to individual “backpack journalists” who do all the jobs that used to require an entire ENG team.

Behind the scenes, broadcasts are managed by a producer who makes the big decisions about program style, content and budget. A director handles the minute-by-minute supervision when the show is in progress, working with everyone to make sure everything runs smoothly. She gives instruction to camera operators, broadcast engineers and technical directors, who control the devices that make the show work.

Stations also need people who don’t work directly on shows. Advertising pays the bills, so sales representatives are responsible for finding clients and making sure that their ads run properly. Sales reps are usually supervised by an ad manager. Many stations also have separate promotions departments that are responsible for getting viewers to tune in.

Everybody at the station answers to a general manager, also sometimes known as a “station manager.”

Jobs in video production

Video production companies run a lot like movie studios, except of course they sell their product to broadcast or cable networks rather than distributing them to theaters.

Like station work, independent shows start with a producer who handles the “big picture” decisions and a director who’s responsible for the show’s creative side. Narrative productions such as sitcoms and dramas require scripts and on-screen talent, so the director works closely with writers and actors to make sure everything works properly. And of course shows also need camera people, lighting people, sound people, art directors, graphic designers, costume people, editors and just about everything else a movie would need.

If a producer is comfortable with the selling-the-product aspect of the job, he’ll meet directly with potential buyers for the show. If not, he might hire a sales staff to help get the show picked up by a network.

Getting started

Because television is a big-dollar industry, all the standard job hunting advice applies double here. Competition for TV jobs is usually fierce, especially for station jobs that are more likely to provide steady paychecks, insurance and other benefits.

It goes without saying (though I’ll say it anyway just so it’s completely clear) that technical positions require technical skills. You might get hired as a camera operator with fairly minimal training (though probably not without at least a little prior experience), but

for complex jobs like editing you'll have to have the education and portfolio to prove that you know what you're doing.

The only positions that tend to be open to people right out of school are production assistant spots. These are standard "gofer" jobs, but they can be good opportunities to at least get in the door (especially if you aren't sure exactly what part of the business you want to do and you'd like to get your feet wet before jumping in).

Ethics

Philosophy and the real world

The Vast Wasteland

On May 9, 1961, Newton Minnow stirred a sudden storm in the television industry. Newly appointed chairman of the FCC, Minnow delivered a speech to the National Association of Broadcasters in which he described television as a "vast wasteland."

Challenging station owners to actually watch their own programs, Newton observed "When television is good ... nothing is better. But when television is bad, nothing is worse." He said that the average TV broadcast day was made up of "game shows, formula comedies about totally unbelievable families, blood and thunder, mayhem, violence, sadism, murder, western bad men, western good men, private eyes, gangsters, more violence, and cartoons. And endlessly commercials — many screaming, cajoling, and offending. And most of all, boredom. True, you'll see a few things you will enjoy. But they will be very, very few. And if you think I exaggerate, I only ask you to try it."

Sound like anything you've seen?

Minnow caused a stir with his suggestion that television should consider itself a public service rather than a source of mindless entertainment. Yet more than half a century later, many critics argue that the only significant change from then to now is that the wasteland has become much vaster.

Kid gloves

All too often when someone's trying to get some creepy new regulation imposed on the media, kids are used as the excuse. "It's bad for the children!" they'll shout about R-rated movies (that kids shouldn't be able to get into without their parents) or M-rated video games (which again parents should be able to screen from their kids if they want to). It's what the logicians call a "straw man" argument.

But in the realm of television programming aimed specifically at kids, the issue takes on a greater importance. As a society we don't generally insist that TV programs be educational, uplifting or otherwise good for their audiences (for which the casts of most

reality shows can be grateful). But what about shows designed specifically for minds that are still in the developing stage?

The history of government regulation isn't great when it comes to requiring that kids' shows be good for kids. Several broadcasters caused a stir back in the early 1990s when they tried to meet an FCC mandate for more educational programming for kids by airing reruns of *The Flintstones*. The commission concluded what was obvious to everyone involved: Fred and Barney weren't teaching anyone anything about what life was like in "caveman times."

On the other hand, the "vast wasteland" isn't completely devoid of shows actually designed to teach kids something. *Sesame Street* is the most obvious example, but PBS isn't the only player in the good-for-kids game.

Many questions remain unresolved. Should kids' shows be more than mere entertainment? What exactly do we mean by "educational"? Is a show automatically bad if it's designed to help sell merchandise? And who bears responsibility for program quality: the broadcasters, the government, parents, or some combination of the three?

Industry self-regulation

S&P

Broadcast television is subject to the heaviest set of government content regulations in the United States. In this sea of federal regulation, additional individual and industry controls seem like "piling on." Yet just about every major broadcast and cablecast operation has a "standards and practices" department of some kind.

S&P folks develop rules that make sure the law is obeyed (particularly regulations regarding indecent programming) and that programs don't unduly offend audience members. If nobody complains to the station (or worse, to the station's advertisers), S&P has a good day.

The department's duties vary from station to station. Some are responsible primarily for making sure the federal rules are followed. Other stations (particularly those that specialize in programming aimed at minors) set up content restrictions that go beyond what the law requires. Enforcement duties range from reviewing content prior to broadcast (sometimes even in the early development stages) to imposing punishments on employees who violate the codes. In some extreme cases (such as with an on-air personality who specializes in controversial content) a broadcast may be set up with a two-second delay so an S&P employee can hit an emergency switch and cut off the broadcast before something inappropriate or illegal makes it onto the air.

Needless to say, creative people aren't always best friends with the S&P department. In the early days of *The Tonight Show*, host Jack Paar walked out in the middle of a broadcast due to a dispute over a joke that today probably wouldn't raise eyebrows if it got told on *Sesame Street*. And of course S&P varies from station to station. Indecent content is illegal on FCC-regulated stations, prohibited on many cable channels (such as MTV), but practically mandatory on premium channels such as HBO or Showtime.

Alcohol ads

For many years, TV ads for any “adult beverage” with more alcohol than beer or wine were few and far between. Unlike cigarettes – which can’t legally be advertised on broadcast television – there’s no law against booze ads. Nor did broadcasters have a general rule against running such ads.

The liquor industry, on the other hand, did have a rule. The Distilled Spirits Council of the United States kept a rule in place for decades prohibiting alcohol advertising on television (other than for beer and wine). The DISCUS rule saved the industry money by assuring that none of its members (the major liquor companies) had to compete against each other by buying TV ads. It also served as a safeguard against Federal Trade Commission consideration of restrictions on alcohol advertising.

In 1996 DISCUS repealed the rule, allowing its members to start TV ad campaigns. However, the change in the rule didn’t result in a major upswing in such advertising (except during special occasions such as the holiday season).

Further, the council retained rules requiring alcohol ads to avoid targeting minors or being unduly offensive. Rules block the use of Santa Claus in ads, require avoidance of racism or sexism and prohibit companies from equating their products with “sexual prowess and sexual success.” Well, I admit I haven’t seen Santa in a rum ad recently.

Law

The First Amendment and free speech

Carriers vs. publishers

Before 1979, courts had trouble telling exactly what cable television was. They had two choices: consider cable a common carrier or consider it an electronic publisher. The distinction wasn’t just something for lawyers to fret over, either. It was a matter of control over what channels subscribers could get and what they couldn’t.

“Common carrier” has a long-established legal definition. Such businesses have a duty to take whoever comes along and pays for their services. The classic example is a railroad, which is expected to sell tickets on a first-come-first-served basis to anyone with the money to pay for a seat.

Publishers, on the other hand, have control over their publications. Newspapers and magazines aren’t required to print anything anyone sends them. Instead, the First Amendment protects their right to pick and choose what gets printed and what doesn’t.

So in *FCC vs. Midwest Video*, the Supreme Court was asked to decide if cable providers were common carriers who had to take all the networks that asked to be on their services (as long as there were empty slots for them) or electronic publishers with the authority to say “yes” to some networks and “no” to others based on their own preferences.

Though the court had supported some of the FCC's earlier efforts to regulate cable, here it drew the line. Requiring cable services to carry any kind of programming that came along deprived them of too much control over their own business. Thus the court considered cable more like a magazine and less like a passenger car.

Cigarette ads

If you're a smoker (or even if you aren't), you're probably well familiar with one of the effects of the Public Health Cigarette Smoking Act: those labels on the sides of your smokes reminding you that you're killing yourself. One of the law's lesser-known effects, however, was a total ban on cigarette advertising on radio and broadcast television.

In the 1950s and 60s, cigarette ads were common on television. Indeed, back in the pre-ad days of show sponsorship, news anchors would often pause in the middle of reading the news to light up and tell the audience how good the sponsor's cigarettes tasted. Yet after one last ad for Virginia Slims aired on January 1, 1971, at 11:59 p.m., smoking disappeared from ad breaks for good.

How was the ban Constitutional? Didn't it violate the tobacco companies' right to free speech? As an academic matter, yes, it probably did. But the only way to get a law declared unconstitutional is to challenge it in court, and the companies didn't. As a matter of politics, the act wasn't anywhere near as bad as what Congress might otherwise have done, measures that could have included stiffer regulations or even an outright ban. Further, the companies saved millions of dollars per year because they no longer had to advertise on television just to keep up with their competitors.

The only legal challenge came from broadcasters, who were understandably upset about the loss of millions of dollars per year in ad revenue. But the court dismissed the suit, observing that TV networks were still free to broadcast as many pro-smoking messages as they wanted. They just couldn't get money from tobacco companies for doing so.

Government regulation

The Prime Time Access Rule

Over-the-air television broadcasting is a "perfect storm" for government regulation. Before the medium even existed, the history of radio regulation clearly established that the government's authority over the public airwaves included at least some control of the content of programming from licensed broadcasters. And television is an immensely powerful medium, making it a popular target for regulation.

Thus Congress and the FCC have imposed many rules designed to make television an instrument of public policy. One such regulation was the Prime Time Access Rule. Government officials decided to limit the amount of the evening broadcast schedule (from 6:00 to 10:00 in the Central time zone) that could be dominated by national networks. The rule required that at least local stations rather than their "parents" in New York control one hour out of the four.

Most stations opted to air some kind of local news broadcast from 6:00 to 6:30, which fit well with the rule's intent. However, the 6:30 to 7:00 slot tended to go not to locally-generated content but to syndicated programming such as game shows and celebrity gossip.

The FCC put the rule in place in 1970, but by 1996 the commission determined that the local/national mix was sufficiently well established that government intervention wasn't necessary. Though the law no longer requires them to do so, the networks still leave 6 to 7 open for local news and Entertainment Tonight (or Wheel of Fortune or some other non-network program) before beginning their prime time lineups.

The Equal Time Rule

On December 6, 2003, Rev. Al Sharpton hosted Saturday Night Live. But not in the Kansas City market, thanks to a federal broadcast regulation with good intentions but occasionally bizarre effects.

The law – The Equal Time Rule – requires broadcasters to provide airtime to all candidates for office at the lowest rate it charges to any candidate. Television and radio have tremendous power to influence voters, so the government set up the rule to keep broadcasters from supporting their favorite candidates for free while charging her opponents for access to the public airwaves.

The principle is simple and reasonably noble. But implementing it has posed problems. In 1959 a “fringe candidate” for mayor of Chicago demanded free airtime after a local news show did a story about the current mayor greeting a visiting diplomat. Though the FCC had to rule in the fringe candidate's favor, it then revised the regulation to exclude news coverage.

However, that didn't completely solve the problem. When Ronald Reagan began running for office – first as California governor and later as President of the United States – broadcasters had to stop running his old movies – most notably *Bedtime for Bonzo* – for fear of being required to cough up an hour and a half of free airtime for his opponents. Reruns of *Law & Order* featuring Senator Fred Thompson and movies starring Governor Arnold Schwarzenegger have suffered similar disappearances during their stars' campaigns.

And Al Sharpton, who was an officially qualified candidate for the Democratic Presidential nomination, on the ballot in Missouri and thus not on the airwaves, at least not until summer reruns.

Must Carry Rules

In the mid-1990s, I had to stop watching *The Simpsons*. It wasn't that I wanted to. Though the show's best episodes were mostly behind it at that point, it was still a regular part of my Sunday evening TV schedule. But I had to give it up, because the Fox Network disappeared from my cable service.

I lived in Lawrence, Kansas, at the time, too far away from the broadcast towers in Kansas City and Topeka to get a sufficiently clear signal without a monster antenna (not really an option for a guy renting half a duplex). So I depended on Sunflower Cable for my television needs. And like many Fox fans on Sunflower, I fell victim to a fight with the FCC's Must Carry Rule for a battleground.

Back in the days before cable, TV broadcasters had it made. Television was in high demand, and with only a handful of stations in any given market competition was small. So when cable companies started setting up shop, broadcasters were understandably concerned. Now they had to compete against dozens (later hundreds) of other stations rather than just three or four. And worse, if people used the cable box as their primary source of television programming, local stations would lose a lot of viewers unless they could find a way to force their way into spots on the cable service.

Recognizing the importance of local television (and the political might of the National Association of Broadcasters), the FCC adopted rules that required cable companies to include area stations on their services. For me in Lawrence, that meant I got all the KC and Topeka stations as part of Sunflower's package.

Ah, but then the stations got a little greedy. Cable subscribers paid monthly fees to their providers, but none of that money got passed along to the local stations. So both sides went crying to the federal government. "They're making money with our programming," complained the broadcasters. "Yes, but we're required to carry their stations," replied the cable companies.

The FCC struck a compromise. Broadcasters could demand payment from cable operators. But if the cable folks didn't want to pay, they were free to drop the stations from their services. The ball was then in the broadcaster's court: they could use must-carry rule to force their way onto the cable box, but only if they were willing to give up their right to be paid.

Back in Lawrence, Sunflower Cable and KSHB (the KC Fox affiliate at the time) couldn't come to terms, and the channel disappeared from the service. Sunflower subscribers were cut off from Fox programming. Fortunately for Simpsons fans in Larrytown, shortly thereafter the KC TV market underwent a shake-up that switched Fox to WDAF, which was still part of the Sunflower service.

Records

The soul's medium

I had trouble naming this section of the guide. I ended up going with “Records” because that tied it in with an existing part of the 8sails media-related stuff selections. But in a way the term is outdated, because traditionally it refers to LP records pressed on vinyl, a technology largely replaced by CDs way back in the 1980s.

“Recordings” might have been more comprehensive and accurate. But then the word was basically “records” with an extra syllable.

“Music” was the next term that came to mind. It’s likely to be the most ancient of all arts, and it makes up the lion’s share of this medium today. But not all of it. Spoken word recordings may not account for the majority of downloads, but they’re still an important part of the recording industry.

Whatever the name, the subject is the same. Musical or not, recorded sounds play a big role in the U.S. media infoscape.

History

Key players

The world's first disc

Early attempts to record sound were less than successful. Actually, to be completely fair, in the early 19th century scientists figured out how to transform sound vibrations (actually small changes in air pressure) into ink marks on a roll of paper. Trouble was, ink marks can’t be played back.

In 1877, Thomas Edison came up with a device that would not only record sound but play it back as well. His Phonograph made scratches on a tinfoil-coated cylinder, and when the process was reversed the scratches were amplified back into audible sound.

Edison’s system worked just fine for what he wanted to do with it: record messages for limited playback, such as bosses dictating letters for typists. But because the system used a cylinder, records couldn’t be copied. This prevented the Phonograph from becoming a mass medium.

Emile Berliner’s Gramophone solved the mass production problem by recording onto a disc rather than a cylinder. The basic “scratching” technology was the same, but once sound was recorded on a master disc it could be turned into plates and reproduced over and over again.

Thus the recording industry was born.

Rock n' Roll's original "drag queen"

Richard Wayne Penniman – better known to the world as Little Richard – has been named one of rock and roll's best singers. His compositions and vocal style were vital to the creation of the new music style in the 1950s. Odd, then, that early on the most popular versions of his songs weren't his.

He climbed a fair way up the charts with songs such as "Tutti Frutti" and "Long Tall Sally." But at the time racism was a strong limiting factor in the careers of many performers. Many white parents wouldn't permit their kids to listen to "black" music. Some white musicians took advantage of this prejudice by doing "covers" of songs by black artists. Pat Boone and Elvis Presley both had more success with Little Richard's songs than the composer himself.

On the other hand, Little Richard had at least one advantage over many other black male performers at the time: his androgynous appearance. He tended to appear on stage wearing brightly-colored clothing, outlandish hairdos and a considerable amount of makeup. Parents in the white suburbs who feared interracial dating weren't as worried about Little Richard seducing their daughters.

The King of Rock n' Roll

Elvis Presley was the music industry's first genuine superstar. There had been plenty of popular performers before Elvis, but nobody with his style, charisma or instant recognition.

His life as a professional singer began in 1953 when he was discovered by Sun Records producer Sam Phillips. His early recordings were blues and country songs, but they featured an upbeat rhythm that set them apart from what most other white artists were doing.

By 1956 he was a national sensation with a string of hits including "Don't Be Cruel," "Love Me Tender" and several other tunes still familiar today. His gyrating performance style upset parents, wowed fans and earned him the less-than-creative nickname "Elvis the Pelvis."

His career got sidetracked when he did a two-year tour of duty in the Army. And while other musicians transformed the industry in the 1960s, Elvis's manager Tom Parker booked him into a long series of movies. Though he made a comeback in the late 60s and early 70s, he was never again the earth-moving pop culture phenomenon of his younger days.

Elvis still holds several music records, including most Top Ten hits (with 38) and most weeks at number one (80).

Stop! In the Name of Love

By the mid 1960s, black performers were finally finding their way into popular culture. Detroit-based Motown Records created a new, unique sound – not as frantically up-tempo as most rock n’ roll at the time – that captured national attention.

The label broke further ground in 1961 by putting its best writers behind The Supremes, an all-female trio (Diana Ross, Florence Ballard and Mary Wilson). After a rocky start or two, the group started climbing the charts in 1964. In the following year the Supremes had a record-setting string of number one hits, including “Stop! In the Name of Love” and “Come See About Me.”

The Supremes’ success in 1965 was particularly noteworthy because of their “Motown sound” success in the middle of the “British Invasion,” when music of an entirely different style generally dominated the charts.

The trio survived some hard times touring on bus caravans, but it eventually came apart over internal problems. Ross, the group’s stand-out star, left the group in 1970 and went on to a successful solo career in music and movies. Wilson managed to keep the Supremes going with other singers for another seven years before disbanding and retiring the name.

All You Need Is Love

Prior to 1964, American musicians dominated the American music market. Beatlemania changed all that.

The Beatles started small, playing clubs in their hometown of Liverpool, England, and then Hamburg, Germany. The band was originally formed by John Lennon and Paul McCartney, who were joined by George Harrison. After two or three other performers came and went, they settled on Ringo Starr as a fourth member. Manager Brian Epstein picked them up as a client in Germany, cleaned up their image a bit and helped make them a big success in Britain.

From there they formed the vanguard of the British Invasion, a period of immense popularity for English groups in the United States. The group won the hearts of American audiences with cheerful numbers such as “I Want to Hold Your Hand” and “Can’t Buy Me Love.” Their conservative suits, “mop top” haircuts and quirky personal styles made them an appealing combination of safe and rebellious, perfectly suited to the mood of the time.

And as the times changed, the Beatles transformed as well. Their late 60s music reflected the anti-war, pro-drug Hippie counter-culture. In 1966 they gave up touring, focusing on studio work and experimenting with new music techniques and Eastern philosophy.

By 1970 internal rifts between band members broke the Beatles up, but all four went on to successful solo careers.

The Man in the Mirror

Michael Jackson began his musical career at the ripe old age of 11, singing lead for his brothers in The Jackson 5. If he'd never done anything else, this early work for Motown would have made him a star.

But he became a genuine pop culture phenomenon after teaming up with record producer Quincy Jones. Their first collaboration – *Off the Wall* – established Jackson as a solid solo act. But his next record made history.

Thriller included no less than seven songs that made it to the top ten. It remains the best-selling album of all time. It also paved new ground in the growing market for video music. Jackson became the first black performer to get regular play on MTV, and his video for the album's title track was shown over and over again even though the full version was more than 14 minutes long.

That alone would have cemented his spot in the history books. But he went on to many other successes, such as co-producing the USA for Africa "We Are the World" hit, starring in *Captain Eo*, a movie attraction at a Disney theme park, and releasing several more highly successful records.

His fame brought his personal life under close scrutiny, leading to accusations ranging from plastic surgery addiction to child molestation. But after his death in 2009, his musical legacy has endured.

I Wanna Be Sedated

By the middle of the 1970s, popular music hit a rut. Many people – critics and ordinary listeners alike – felt that the industry had become self-indulgent (not unlike society as a whole), churning out empty-headed, over-produced nonsense. So a market developed for a backlash, rock that returned to simple chords and energetic performances.

In 1976 the Ramones paved the way for what was to become the punk rock movement. Some of their songs were covers of old beach songs such as "California Sun" and "Surfin' Bird." Many others were originals, such as "Sheena Is a Punk Rocker" and "I Wanna Be Sedated." But they all had a common beat, simple melodies, and performances that were loud and fast.

The band's low-key image matched its music. Publicly they were all known by the last name "Ramone" (even as old members dropped out and new musicians were added). They wore tattered clothes and perpetually looked like they needed a shower. Thus they helped create a musical style that was about music rather than image.

The Ramones never once recorded a top ten hit. But then climbing the charts wasn't really what they were after. Instead, they established a new style of music that continues to influence the industry today.

The Prophets of Rage

Public Enemy didn't invent rap music, a genre that was pioneered by groups such as the Sugarhill Gang years earlier. But they brought a powerful political message to their work that music rarely matched before or since.

Three musicians made up the core of the group: vocalists Chuck D and Flavor Flav and DJ Terminator X. After opening for the Beastie Boys and releasing *Yo! Bum Rush the Show* in 1987, the group followed up with *It Takes a Nation of Millions to Hold Us Back* in 1988 and *Fear of a Black Planet* in 1989.

Nation of Millions broke new ground with tracks such as "Don't Believe the Hype." *Fear of a Black Planet* went even farther into radical political themes with songs such as "911 Is a Joke" and "Fight the Power" (which later gained further fame as the opening theme in Spike Lee's *Do the Right Thing*).

Public Enemy was no stranger to controversy. Group member Professor Griff drew criticism for making anti-Semitic remarks, and the video for "By the Time I Get to Arizona" showed a fictional scene of state politicians being assassinated for refusing to recognize the national Martin Luther King holiday. And of course front man Flavor Flav had an embarrassing post-band career on reality television.

On the other hand, Public Enemy's influence on rap and hip hop is hard to overstate (check the "Legacy" section of the Wikipedia entry for a sample). And their work represents a point in time when the music was designed to motivate listeners to work for change in the world.

Media and Society

Not what you say ...

Music affects us psychologically in ways that other communication methods don't. Audio input – especially the carefully arranged sounds found in musical compositions – can bypass our conscious thought processes and go straight for our emotions. You can experiment with this effect by selecting the "isolated score" audio option available on many DVDs and focusing on how the movie's music manipulates your reactions to what you're seeing on the screen.

At least as far back as the Ancient Greeks, philosophers recognized the power of music. In *The Republic* – Plato's famous book about the creation of an ideal society – Socrates muses about what music should and shouldn't be allowed. His concerns seem odd to modern readers, because he focuses not on the message of music but on the way the notes are put together. Some composition schemes would be allowed, he said, while others would be banned.

Plato's approach has relatives in the 21st century. Some of rock's detractors earnestly believe that the music's rhythm is designed to open listeners up to evil forces. Critics such as Jack Chick argue that even Christian rock with Christ-centered lyrics is still evil because the underlying beats put demons in your soul.

However, we don't have to go to religious extremes to find evidence that music's lyrics aren't always as important as the notes and beats. Research indicates that listening to songs can trigger biochemical reactions in the body such as the release of dopamine to the brain (the same thing that happens during other potentially addictive activities such as sex).

Technology

Origins (the nerd stage and beyond)

Records

For the first hundred years or so of the music industry's history, sounds were recorded for playback on grooved discs. Although the underlying technology changed little from the days of Emile Berliner until the 1980s, the industry did try several variations on the record theme.

The first format in widespread commercial use (starting around 1900) was the 78, so called because records rotated 78 times per minute. The grooves where the sounds were recorded were larger than systems that developed later, so even a relatively large record (with a ten inch diameter) could only store roughly three minutes of music per side. Further, records were made from shellac, which made them stiff and brittle.

In the late 1940s, two different systems developed at more or less the same time. RCA developed the 45, a smaller (seven inch) format that like the 78 had room for only one song (or two if you count the "B side"). These were ideal for juke boxes, because the machine could easily select and play whatever tune had been ordered. They also fit well with marketing systems such as "Top 40," which followed the popularity of single songs.

On the other hand, CBS came out with the Long Playing record, also known as the 33. LPs were larger (12 inches) and rotated slower, so they could hold 20 to 30 minutes of music per side. Artists using this "album" format had to create sets of songs rather than just a catchy single.

Both of the new formats played records made of vinyl, which was more flexible and harder to damage (though they could still be scratched and rendered unplayable with careless handling). And both formats remained in common use until replaced by the CD in the early 1980s.

Tape

At the height of World War Two, Allied intelligence had a problem on its hands. They'd been monitoring radio broadcasts out of Germany and noticed something strange. When a prominent Nazi official made a speech, it was broadcast over the radio (no surprise there). Later it would be rebroadcast from stations in other parts of the country (again no surprise). However, the rebroadcasts were so close together that they couldn't possibly be

the same person giving the same speech in different cities. And yet the audio quality was so clear that it couldn't possibly be a recording. Intel analysts concluded that the Nazis were employing voice doubles, actors who sounded just like government officials, to re-read the speeches for different radio stations.

The Germans were actually using magnetic tape, a technology the “good guys” hadn't developed yet. Tape recording was entirely electronic, so it lacked some of the clicks and pops of the older mechanical disc recording systems. In addition to improved audio quality, tape also offered other benefits such as ease of editing, with mistakes simply snipped out and the tape with only the good parts spliced back together.

After the war the United States seized this new technology and swiftly put it to use back home. At first it did duty primarily in recording studios, but eventually consumer formats such as the cassette tape hit the market. Cassettes were popular because people could make their own “mix tapes” by recording their favorite tracks from albums, and they were skip-proof for cars and other out-of-home uses.

Even after digital audio replaced tape for most personal uses, it continued to be used in recording studios because of the high quality audio that could be stored on it.

CDs

For the first century or so of its history, the recording industry used **analog** technology. Analog systems record sound vibrations directly, storing them as scratches on a disc or magnetic fluctuations on a tape. But in the 1970s, engineers began work on a new, **digital** means of recording and playing music. The new technology converted sounds into binary code, which could then be decoded by a player and turned back into sound.

Sounds like a lot of trouble, right? Why not just record sound directly rather than adding a lot of complicated encoding to the process? Because digital information could be stored on compact discs.

CDs offered several advantages over older systems. In particular, they were smaller than older systems. An entire LP's worth of music (and then some) now fit on a disc smaller than a 45. The new discs were also harder to damage. They weren't as easy to scratch as vinyl records, and they didn't snag or accidentally get erased like tapes.

In 1983 CD players and discs hit the U.S. market. At first they were too pricey for most consumers (especially as many people already had music collections on record or tape). But eventually they started to catch on, especially after CD players became standard equipment in cars and computers.

An economic principle called economy of scale – basically the more you sell, the less you have to charge – helped drive down the price of CD players in the 1980s, thus making the new format more popular. But the same principle failed to drive down prices of the discs themselves. Record companies kept the prices the same even as costs decreased, which of course increased their profits.

MP3s

Once songs could be stored as digital information on discs that could be played in computers, it was only a matter of time before the “middle man” got cut out. In the 1990s a method of digital compression called Moving Pictures Experts Group Audio Layer III – MPEG Audio Layer 3 for short or MP3 for even shorter – saw a big surge in popularity. Using free software, users could put audio CDs in their computers, convert the songs to MP3s and save the files on their hard drives.

The conversion process involves “lossy compression,” a system that reduces data by “simplifying” recordings. This compression causes a loss in audio quality. For many purposes – such as playing over the bad speakers in my noisy Jeep – the difference isn’t significant. But when played over a high-quality sound system, MP3s don’t sound anywhere near as good as uncompressed music.

Once MP3 use became common, two things happened almost immediately. First, when “burnable” CDs hit the market, people could make their own mix discs. But another, less above-board practice also arose: downloading. Because MP3s were data files, they could easily move from computer to computer. File sharing systems such as Napster allowed users to download vast collections of songs without paying a dime for them.

Though the music industry fought hard against illegal downloads (more on that later in this chapter), it couldn’t un-invent MP3s. Downloading forced the record companies to make radical changes in the way they do business.

Industry

How the industry makes money

Decline and reinvention

For decades being a music company executive was one of the world’s sweetest deals. The “Big Six” – EMI, CBS, BMG, MCA, Warner and PolyGram – were among the world’s most profitable businesses.

Music downloading set the whole industry on its ear. As any Economics 101 student can tell you, artificially inflated prices tend to lead to the development of a black market for goods. So when record companies converted the economy-of-scale savings in CD production to extra profits rather than less expensive CDs, they set the stage for what happened once illegal downloading became easy to do.

The bottom dropped out of the business almost overnight. In 1999 the industry was taking in approximately \$14.6 billion per year in the United States. Nine years later, that figure was down to \$10.4 billion. The Big Six became the Big Four – EMI, Sony, Warner and Universal – and may soon become the Big Three if the EMI/Universal merger clears antitrust hurdles.

Nor were the big labels the only victims. Online music distribution via direct services such as iTunes and CD sales from online retailers such as Amazon drastically reduced the need for “brick and mortar” music stores. Even large chains such as Tower Records found themselves bankrupt.

The business models emerging from the ashes are more complex than the old sales schemes. For years most sales centered on albums, sets of music on LP, cassette tape or CD. They were neat little bundles with more-or-less standard prices. They came in standard sized packages with art on the covers.

Now, however, listeners have the option to download single songs rather than entire albums. Direct online sales don’t require standard packaging, pricing, album art or a lot of the other longtime staples of the music industry. These changes have posed a host of questions the big labels are still struggling to answer.

Licensing

Music ownership starts simple. If you compose a song, you own it. You have the right to sing it whenever and wherever you want, and you have the right to get paid for your performances. But what if you want to sing a song written by somebody else? Or if somebody else wants to sing a song you wrote? Or play a recording of your song at a party or on the radio or on the soundtrack to a movie?

If every individual composer and performer had to strike separate deals with everyone out there who wanted to play their music ... well, the agreements with radio stations alone would swiftly turn into a licensing nightmare.

Fortunately, Performance Rights Organizations (also known as royalty agencies) simplify things somewhat. PROs such as ASCAP (the American Society of Composers, Authors and Publishers) and BMI (Broadcast Music Incorporated) serve as go-betweens linking artists with those who want to play their music for profit.

On one side, artists join a PRO and make their music available via the service. Then radio stations, DJs and the like can subscribe to the PRO’s service and get the rights to play the music in exchange for a fee. Of course they have to keep track of which songs are actually being played so the right artists get compensated. And special uses (such as movie soundtracks or ads) typically require special deals.

PROs occasionally stir controversy, such as when ASCAP threatened legal action against the Boy Scouts of America for singing copyrighted songs. But for the most part they do a solid job at making sure users pay and artists get paid.

DRM (or why I won’t buy music from iTunes)

A few years back I was getting up to leave the theater at the end of *Lord of the Rings: Return of the King* when I noticed a familiar voice on the soundtrack for the end credits. I’ve been a fan of Annie Lennox’s work ever since her days with the Eurythmics, and I liked the song she did for the movie. My usual 20th century mindset was to buy the CD for whatever music I wanted to own, but in this case I didn’t want the whole soundtrack

album, only the one song. So when I got home, I got onto iTunes and spent a buck for the song I wanted.

That's when the trouble started. Or to be more precise, the trouble started eight years later when the hard drive on my computer died. I had a backup of my music (thank goodness), and when I loaded it back onto my new drive I could play all my music from CDs just like before the crash. The stuff I bought from iTunes, on the other hand, was locked up. Every time I tried to play any of it, iTunes asked me for a password (which of course I'd forgotten, as it was stored on the old, dead hard drive).

In this brave new media world, ownership is not what it used to be. In the old days of CDs, when you bought a disc you bought the right to play the music on it. You also got the right to make backup copies (such as digitizing it to MP3s) as long as you didn't start making extra copies for your family, friends or strangers. But Digital Rights Management changes all that. Now companies can put hidden locks on the music you buy, preventing you from making illegal copies but at the same time also blocking some forms of legal use in the bargain.

Responsible companies selling DRM-restricted media are good about at least disclosing the terms of use up front rather than burying it deep in the fine print of user agreements or failing to disclose it at all. But some critics charge that even a well-publicized DRM lock is still a problem. After all, why should the simple act of buying a copy of a song be more than a low-involvement purchase?

Careers

In the corporate world

As you've probably already gathered by reading this far, the recording industry is in a state of transition. However, some of the basics of the business are likely to remain unchanged.

Songs will still have to come from somewhere, so there will still be a demand for the people who write them (composers) and the people who sing and play them (performers). And of course making recordings (no matter how they eventually get to the public) still requires producers and studio professionals.

Artists who don't handle their own distribution often end up signing with a record label, either one of the large corporations or one of the many independents in the business. On the label's side, A&R (Artist and Repertoire) people scout new talent and serve as liaisons between talent and the company. The distribution process also requires several kinds of marketing professionals (package designers, public relations people and the like).

DIY

Starting a band

As a responsible adult, one of the things I'm probably expected to do is try to talk you out of trying to break into the music industry. "Sure, start a band in your garage," I should say. "Just make sure you have a backup career in mind in case it doesn't work out." Strongly implying, of course, that you aren't going to make it.

That's probably good advice. But if you're going to try it anyway, go for it. All I ask is that you understand what you're getting into.

As far as your chances of success, you should have a better grasp on that than I do. In general, if you and your bandmates lack skill and talent then your chances aren't good. Objectively, if you aren't devoting a lot of time and energy to developing your craft, that's a good indication that to other people (such as A&R pros who might sign you with a label) you aren't going to sound like you're serious.

Even if you do turn out to be good enough to make it, you still need to understand the limits of working for a record label. In particular, don't be surprised when the profits from your recordings don't turn out to be what you expect. From the \$16 price tag on a typical CD, the label will keep somewhere around \$5 as profit. Most of the rest of the money will go to other parts of the business (distribution, retail and so on), often leaving you with a dollar or less. And even that will be cut by the label's demand that you pay back any money advanced to you for recording costs and the like. You may also be required to place some of your money in an advance fund to cover the expenses of your next album. After everyone else gets done eating, your slice of the pie can be as small as 40 cents.

Ethics

Personal morality and the profession

Backmasking

One of the most persistent urban legends in the music industry is that musicians use "backmasking" to hypnotize their fans into worshipping Satan or killing themselves. The rumors claim that messages recorded backwards in songs can be picked up subconsciously by listeners, who get brainwashed into doing whatever the backmasking tells them to do.

Backmasked messages take a couple of forms. In some cases, bands deliberately incorporate backwards messages into their music. For example, The Bloodhound Gang included a backwards playing of the words "Devil child will wake up and eat Chef Boyardee Beefaroni" in one of their songs, most likely as a joke.

In others, however, lyrics that sound like normal speech can end up sounding like something else when played in reverse. One of the strangest backmasking accusations was made against the theme from the Mr. Ed Show (a goofy sitcom from the 1950s and 60s about a talking horse). Rumor held that when the theme was played backward that the words “This song is sung for Satan” could be heard.

Whether intentional or accidental, evidence does not support the notion that the human brain can decode backmasked words or that such messages have any effect on listeners. Though artists might face a slight ethical concern about upsetting listeners by backmasking, critics who accuse backmaskers of being Satanic brainwashers face a much more serious ethical problem.

Industry self-regulation

The Washington Wives

Back in the mid 1980s, the federal government lashed out at the music industry. Actually, it wasn't the government itself. Rather, it was a group of four women who were all married to prominent politicians. The group, informally known as the “Washington Wives,” was officially called the Parents Music Resource Center.

Led by Tipper Gore, wife of then-Senator Al Gore, the PMRC alleged that popular music trends were responsible for social decay, particularly the disintegration of the traditional “nuclear family.” The group came up with a “Filthy Fifteen” list, a set of songs it claimed had lyrics that were unsuitable for younger listeners due to references to sex, violence, drugs, alcohol or the occult.

In response to the PMRC's pressure, several record labels agreed to adopt a content warning system akin to the ratings used for movies. But before the system could be put into place, the Senate held a hearing on the subject of indecent music (despite the government's complete absence of authority to censor song lyrics). The hearing drew a lot of publicity when musicians as different as John Denver and Frank Zappa appeared to testify against government-mandated labels.

The industry adopted the PMRC's black and white “Parental Warning – Explicit Lyrics” stickers as a self-regulation system. The “Tipper sticker” was supposedly designed only to warn parents about albums with potentially indecent songs. However, the system turned into economic censorship when several retailers such as Wal-Mart refused to carry albums that bore the sticker. On the other hand, some musicians regarded the stickers as badges of honor, not to mention a good way to attract listeners looking for less mainstream music.

Law

The First Amendment and free speech

As nasty as they wanna be

Thanks to the First Amendment, in the United States most music censorship is economic (such as when stores refuse to carry music with risqué lyrics) rather than governmental (other than FCC restrictions on radio play, that is). Thus a sheriff in Broward County, Florida, caused a controversy when he warned local music stores that they could be prosecuted for selling an album, *As Nasty as They Wanna Be* by 2 Live Crew.

The album included a song – “Me So Horny” – that the sheriff claimed was a violation of the state’s obscenity law. After a federal judge declared the song legally obscene, music store owner Charles Freeman was arrested for selling a copy to an undercover police officer. Then three members of the band were busted for performing the song in a nightclub.

The performers were acquitted at trial, at least in part because Harvard Professor Henry Louis Gates testified that the band’s lyrics had legitimate roots in African-American musical traditions. Freeman was convicted, but his conviction was overturned on appeal based on the Constitution’s protection of free speech.

The controversy primarily served to popularize the album, which climbed to number 29 on the Billboard chart.

Lawsuits and the courts

RIAA vs. listeners

Copyright violation is both a crime (for which you can do prison time) and a tort (for which you can be sued). On the lawsuit side, the music business’s champion is the Recording Industry Association of America, a trade organization that aggressively drags violators to court.

The RIAA is particularly serious about suing people who download illegal copies from the Internet. Though criminal prosecutions are generally limited to large-scale, for-profit operations, the RIAA has been known to sue even individual downloaders. In 2006 the association filed hundreds of lawsuits against small-time “thieves.” And as each illegally downloaded song constituted a separate violation, defendants got hit with judgments stretching into the millions of dollars.

Despite this aggressive stance, however, the practice still continues. One European industry group estimates that 95% of all music downloads are illegal. Further, some musicians are actually in favor of the practice, observing that downloads are a way for new bands to capture listeners’ attention.

Musicians vs. musicians

Copyright problems also arise between musicians, usually as a result of a practice called **sampling**. Some artists create compositions that use samples – small pieces – of songs by other performers. This practice has led to no end of in-court arguments about how much is too much.

The law creates a “fair use” exception to copyright for some limited uses. One of the standards used to determine whether or not the exception applies is the amount of the original work used in the copy. Copying an entire song wouldn’t pass the test, but using just a few notes may be another matter.

Sampling creates ethical as well as legal concerns. When Vanilla Ice sampled “Under Pressure” by Queen and David Bowie, he stirred a controversy by refusing to acknowledge that his use was a sample. Critics also attack songs they claim don’t have much original musical merit beyond the use of a sample from a better piece of music.

Musician vs. musician ownership problems aren’t limited to sampling. They can crop up anytime some doubt exists about who actually created what. One of the stranger cases was TV producer Gene Roddenberry’s decision to write lyrics for the theme music for the original *Star Trek* series. Though the lyrics were never actually used (good thing, because they were purely dreadful), Roddenberry was nonetheless entitled to half of all the royalties that would otherwise have gone entirely to composer Alexander Courage. And former Credence Clearwater Revival singer John Fogerty found himself in court for stealing a song he wrote. His work for CCR legally belonged to label owner Saul Zaentz, so when Fogerty went solo and later wrote a song called “Old Man Down the Road,” Zaentz claimed that the melody was a reheated version of CCR hit “Run Through the Jungle.” Though the jury concluded that the two songs didn’t sound that much alike, Fogerty still had to go through the hassle of being sued for stealing a song he wrote.

Radio

Empire of the Air

Lee De Forest carved his name into radio history with two things: invention of the Audion tube and a quote from his autobiography: “Unwittingly then I had discovered an Invisible Empire of the Air, intangible, yet solid as granite, whose structure shall persist while man inhabits the planet.”

Odd, then, that he was talking about the birth of a medium that has thrived precisely because of its ability to adapt to social and technological changes. When De Forest did his pioneering work, radio was a curiosity. Then it became a wireless extension of the telegraph. Then the mainstay of in-home entertainment, arguably the most important medium in the world. Then primarily a source for out-of-home music programming. And now an ever-growing popular source for news and talk.

In many ways radio would have been a good subject to start this survival guide. The medium has a lot to teach us about the interrelationships between communication, technology, commerce, regulation, entertainment and society.

History

Key moments

Wireless catches a killer

Radio pioneer Guglielmo Marconi faced a challenge. As early as 1901 he proved that radio signals could travel across the Atlantic Ocean (despite critics who claimed that signals were limited to “line of sight”). His new “wireless telegraph” system was much cheaper to maintain than the expensive, cumbersome Transatlantic Cable that had previously been the only way to send a signal directly across the ocean.

Trouble was, the cable had been in operation for decades and people were used to using it. Why would anyone want Marconi’s great new system, if it didn’t do anything that people couldn’t already do?

His invention finally caught the public’s attention thanks to an unusual source: Hawley Crippen, who in 1910 killed his wife and disappeared with his mistress, Ethel Le Neve. The captain of a steamship called the *Montrose* noticed the fugitive couple (with Le Neve dressed as a boy, no less) among his passengers on a voyage from England to Canada. But how could he notify the police in time to make sure Crippen would be caught when they reached their destination?

Fortunately, the *Montrose* just happened to be equipped with a Marconi wireless transmitter. He sent word back to Scotland Yard. An investigator swiftly caught a faster ship to Canada and was waiting for them when they arrived. Crippen was tried, convicted and executed. Le Neve was acquitted and emigrated to America.

Marconi, on the other hand, had a sensation on his hands. Not only did his invention get a lot of free publicity, but now it was easier for members of the public to understand why wireless was such a great improvement over wires.

Fessenden plays the violin

The big problem with Marconi's wireless system was that its transmissions were either on or off. There was no middle ground for sounds with vibrating "grey areas," the kind that make up almost everything we hear. The on-or-off system worked fine for Morse Code. But who wanted to sit around their living rooms at night deciphering a code?

Working with General Electric, an engineer named Reginald Fessenden developed a system that "modulated" the signal to allow it to carry vibrating waves and thus transmit actual sounds rather than just dots and dashes.

On Christmas Eve 1906, he gave his device a try. The world's first real sound broadcast included Fessenden reading Luke 2:14 and playing "O Holy Night" on the violin. Though the first transmission travelled only a few miles, a second attempt a week later on New Year's Eve went as far as the Caribbean.

Most of the people in his "audience" were severely freaked out by the transmissions. Bear in mind that almost everybody listening to radio at the time was a professional wireless operator whose job it was to send and receive Morse messages. So when the radio began sending them music and Bible verses ... well, it was a little like having your shoes suddenly start talking to you.

The Golden Age

American participation in World War One tied up the development of radio until the early 1920s, but once the war was over the new medium blossomed. At first growth was hampered by technical requirements: broadcasters had to buy a transmitter, listeners had to buy (or build) receivers, and eventually the federal government had to step in to prevent stations from broadcasting over each others' signals. But once the kinks got ironed out, radio became one of the world's most important media.

When it came to getting news out to the public, radio had a couple of advantages over newspapers. It was immediate, so events (such as the famous fiery destruction of the Hindenburg) could be reported as they happened rather than making everyone wait until the next morning for the next edition of the newspaper to come out. Radio was also accessible to audience members who couldn't read.

In the entertainment department, again radio held a couple of edges of its big competitor, movies. Once you bought a radio, receiving broadcasts didn't cost anything extra. So you

could listen as often and as long as you liked for free. And radio came straight into your home rather than dragging you out to a movie theater.

Radio also did an excellent job of “meshing” (or in 21st century terms, “converging”) with other media. For example, Popeye the Sailor began life as a newspaper comic strip. But he grew even more popular when he got his own radio show. And of course later he flourished in cartoons shown in movie theaters as well.

Many of television’s familiar show categories – from soap operas to dramas to comedy-variety to game shows – were originally pioneered on the radio in the 1920s, 30s and 40s. But of course television was basically radio plus pictures, so when TV sets started showing up in living rooms across the country in the 1950s, radio had trouble competing. It survived and thrived by finding new ways to reach audiences, but its Golden Age came to an end.

Nazis bomb London

The United States was late joining World War Two; the Axis powers had been invading other countries for at least half a decade and open war had been raging in Europe for more than two years before we finally kicked in. Of course the major factor in the U.S. decision to join the fray was the Japanese attack on Pearl Harbor. But even before that, a famous series of radio broadcasts had been nudging America toward the fight.

CBS radio news correspondent Edward R. Murrow had been covering growth of Nazi power in Europe for some time when war broke out in 1939. As German airplanes began to drop bombs on London, Murrow covered the attack with live broadcasts that began with the catchphrase “This is London” and concluding with “Good night, and good luck” (a phrase he would continue to use later when he moved to television). Risking his life by transmitting from a rooftop in the middle of air raids, he brought the war directly into American living rooms.

The emotional impact of his broadcasts was much greater than the effect of newspaper articles, outdated newsreel footage or radio news read by an announcer in a studio. Further, his tales of death and destruction came from England, the land of Shakespeare and Dickens, and thus had a greater impact on white, middle class Americans than similar news from other countries.

The result was an increase in public support for American intervention, a profound early demonstration of radio’s ability to influence public opinion.

Top 40 reinvents radio

During radio’s Golden Age, the broadcast schedule was typically divided into programs the way television is today. However, in the early 1950s television – “radio plus pictures” – gained popularity, many programs and many audience members made the move to the new medium. Radio found itself in search of new ways to appeal to the public.

The most successful adaptation was the switch to all-music formats, as music didn't really need pictures to communicate effectively. And the most commercially successful new music format was Top 40.

In 1951, Todd Storz, who was program director for KOWH in Omaha, noticed something that had been obvious to the music industry for some time: some songs were more popular than others. They got more play on jukeboxes, and they sold more copies in record stores. Storz decided to move this principle to the airwaves by asking local record store owners which tunes were the most popular and then playing those songs on the radio.

Three years later he purchased WHB in Kansas City, an AM station with a powerful transmitter. He converted the station's programming to his new format, dubbing it "Top 40." WHB became the first station to play a countdown, starting with the 40th most popular song and working all the way up to the most popular music of the week.

Though Storz is generally recognized as the creator of the format, entrepreneur Gordon McLendon usually gets the credit for launching Top 40 onto the national stage.

The format continues to thrive in the 21st century. As "Top 40" is something of an insult with some audience members, the format is now often referred to as Contemporary Hit Radio or CHR.

Key players

Edwin Armstrong

Whenever historians start discussing who was the "inventor" of a particular technology or who was "the first" to put it to use, debates almost always arise. In the realm of radio, Marconi, Fessenden and De Forest are often mentioned. But in the Media Survival Guide we're going to turn our attention to Edwin Howard Armstrong. Not only did he pioneer FM radio – commercial broadcasting's most successful technology – but he also fought long and hard against stiff government and corporate resistance to bring his inventions to the public.

In the early 1920s Armstrong figured out a way to improve De Forest's Audion tube to produce a much more powerful radio signal. During World War One he designed a lightweight radio transmitter that allowed airplane pilots to communicate directly with their bases. But most important of all, he figured out how to transmit sounds using Frequency Modulation, a technology that produced a much clearer, more static-resistant signal than the Amplitude Modulation systems most broadcasters were using at the time.

Unfortunately, because most broadcasters were using AM, they were resistant to potentially expensive changes in the radio market. RCA led lobbying efforts to get the portion of the broadcast spectrum set aside for FM shifted to a new location, which was a tremendous setback for FM stations. The company also claimed a rival patent on FM technology and used its legal muscle to beat Armstrong in court.

Though the lengthy legal battles ruined him financially and probably contributed to his suicide in 1954. However, subsequent historical developments and court fights have clearly established his importance to the medium.

David Sarnoff

On April 14, 1912, David Sarnoff was working for the Marconi Wireless Telegraph Company of America as a radio operator atop a tall building in New York City when he picked up a message: “SS Titanic ran into iceberg, sinking fast.” Legend has it that he remained at his post for the next 72 hours straight, relaying information on the disaster to the public.

But Sarnoff was more than just a dedicated operator. He saw radio not as just a way for ships to communicate with each other but as a means to transmit voice and music into homes. At first his employers scoffed at the idea, but when Marconi Wireless was taken over by General Electric and made part of RCA at the end of World War One, his new bosses saw potential in his ideas.

Of course in order to sell radios to the public, someone would have to produce broadcasts worth listening to. So Sarnoff pioneered the transmission of something besides ship locations, starting with the Jack Dempsey-Georges Carpentier boxing match in 1921.

His next brilliant innovation was the network, a series of radio stations in different cities all carrying the same broadcast. In 1926 RCA created NBC, the world’s first broadcast network.

Under his leadership, RCA later led the way into the brave new world of television. But that’s a subject for another chapter.

John R. Brinkley

Critics have described John Romulus Brinkley as “the ace of con artists,” “the king of quacks” and “the worst doctor ever to practice medicine.” He was also an important pioneer in the early days of radio broadcasting.

In 1915 Brinkley graduated from the Eclectic Medical University of Kansas City. Though the place was essentially a diploma mill, his “degree” was good enough to get him a license to practice in Kansas. He set up shop in the back room of a drug store in the small town of Milford.

At first business was slow. But then he hit upon the idea of curing male impotence by surgically implanting goat “glands” (i.e. testicles) into patients’ scrotums. In short order he was making good money performing his operations, mostly because he was as good at marketing as he was bad at medicine.

On a national promotional tour, Brinkley met Harry Chandler, the publisher of the *Los Angeles Times*. The newspaper had recently set up KHJ, one of the first radio stations in California, and Brinkley fell in love with the new technology, immediately seeing radio’s potential to reach a huge audience of potential goat gland customers.

Back in Kansas, he established KFKB (Kansas First Kansas Best). At first the station only reached part of the Midwest, but by upping the signal power he was eventually able to reach most of the United States and partway into the Atlantic.

Some listeners didn't like Brinkley's broadcasts. In particular, the American Medical Association objected not only to promotion of his surgery business but also to a show segment called The Medical Question Box, in which he would diagnose illness over the air and prescribe medication to people who sent letters describing their symptoms. Eventually the Federal Radio Commission (the forerunner of the FCC) received enough complaints that they held a hearing and revoked Brinkley's broadcast license.

Not to be undone by anything as trivial as the federal government, he relocated his transmitter to Mexico just south of the Texas border. He also upped his signal strength until his broadcasts travelled halfway around the world. And the FRC couldn't do a thing about it because he was outside U.S. jurisdiction.

Eventually Brinkley's misdeeds caught up to him. His medical practice faced competition from other sham impotence cures and of course a swelling tide of malpractice claims from people who got sick or died after surgery. He also openly expressed sympathy for the Nazi cause, an unpopular view even in prewar North America. In the late 1930s his legal troubles destroyed his finances, Mexican government bulldozers destroyed his transmitter and the whole mess destroyed his health. At least he had enough foresight to pre-pay for a fancy headstone.

Alan Freed

Alan Freed didn't invent rock and roll. He didn't even invent the term (it was originally street slang for "sex"). But he was the first to use it to describe a new kind of music that was emerging from R&B roots in the 1950s. And he was instrumental in popularizing this new musical genre.

In 1951 Freed worked with a record store owner in Akron, Ohio, to create an R&B-oriented radio program on a local radio station, WJW. The program was popular with listeners, and the following year Freed organized The Moondog Coronation Ball, an event commonly considered the world's first rock and roll concert. It drew a crowd far too large for the venue, and a riot ensued.

The fallout from the concert was just part of a larger controversy. The new genre and Freed's radio shows devoted to it were extremely popular with young people on both sides of the white/black color divide. However, many parents in middle class white America were uncomfortable with the thought that their kids were listening to "black music." Thus Freed's radio shows drew critics almost as easily as they drew audiences.

Freed was finally undone by some less-than-stellar business dealings. He made a practice of sharing songwriting credit with some of the artists whose records he played, which of course entitled him to part of the royalties if the songs sold a lot of copies. But worse, he got caught up in the payola controversy that rocked the DJ business in the late 1950s. The scandal damaged his career, drove him to drink and eventually led to his untimely death at the age of 43.

Role in society

Fireside chats

In March of 1932 the new President, Franklin Delano Roosevelt, had a big job ahead of him. The United States (and much of the rest of the world) was at the low point of the Great Depression. A quarter of all workers were unemployed. Banks were failing left and right. Something had to be done.

Roosevelt's solution was the New Deal, a series of government programs designed to get the economy back on its feet. He had the support he needed in Congress, but in order to make his reforms work he also needed the support of the American public.

To reach people as efficiently and effectively as possible, he used a technique that worked for him when he was Governor of New York: the "Fireside Chat." Using the radio to reach as large an audience as possible, Roosevelt spoke directly to the people. His tone was personal and informal, sort of like a friendly conversation in front of a warm fire in a fireplace. But the topics he addressed were serious business: bank regulation, currency reform and many other New Deal efforts.

As his New Deal programs began to face opposition, he continued to use the Fireside Chats to appeal to the public for support. And as the United States drew ever closer to involvement in the wars brewing in Europe and Asia, Roosevelt again "chatted" with listeners to help calm their fears and prepare them for the coming conflict.

These speeches were so effective at influencing public opinion that every President since Roosevelt has made a regular practice of directly addressing the American people on a regular basis. To be sure, the technique hasn't always worked perfectly. In the second week of his presidency, Jimmy Carter gave a televised "fireside chat" sitting next to an actual fireplace and dressed in a comfy-looking sweater rather than the traditional business suit, buying himself the nickname "Jimmy Cardigan." But in general this method of mass communication has been of immense benefit to the President.

Of course in the 21st century the fireside has gone digital. Weekly addresses are now available directly on the Internet.

Technology

Origins (the nerd stage and beyond)

The Transmitter and Receiver

In the second half of the 19th century, scientists discovered that they could create electromagnetic "disturbances" that would pass from one location to another without a

solid physical connection (such as a wire) between the two. At first these discoveries were little more than technical curiosities. But then some folks with both technical expertise and business sense – chief among them Guglielmo Marconi – figured out how to use the phenomenon to communicate over great distances.

The process basically requires some kind of electrical discharge at the sending end (the “transmitter”) causing a “ripple” that can then be picked up in other locations by “receivers.” The earliest versions – spark gap transmitters – were little more than tiny bolts of focused lightning that could create audible disturbances sort of the same way you can hear your radio reception crackle when lightning flashes during a thunderstorm.

Eventually of course the technology improved, allowing not just clicks and beeps but actual sounds to go out “over the air.”

The Audion Tube

One of the tricks with radio waves is that in electrical terms they’re very small. In order to turn them from what’s sent out over the air to an audio signal that people can actually hear, they need to be amplified. The means for doing that effectively was first pioneered by Lee De Forest.

Without getting too far into the technical stuff (and if you love technical stuff, check some of the links below), the Audion enables a radio receiver to zero in on one particular frequency to the exclusion of all others. Thus listeners could “tune” their radios to one particular broadcast and not have to listen to the entire spectrum all at once.

Coincidentally, De Forest probably never really understood exactly what made his invention work. He only knew that it did.

The Portable Receiver

The Audion and its successors were vacuum tubes, electrical devices that look a little like light bulbs. Unfortunately they shared a few characteristics of light bulbs other than appearance, particularly their size, high energy requirements and tendency to burn out.

Thus the fewer and more efficient the tubes, the smaller transmitters and receivers could be. Work by engineers such as Edwin Armstrong brought equipment bulk down from room size to desk size to briefcase size.

However, true radio portability wasn’t achieved until the late 1950s. After scientists at Bell Labs invented the transistor, reliable radio receivers could be as small as a pack of cigarettes. Further, the absence of tubes meant that none of the parts would have to be replaced, and they consumed such small amounts of electricity that they could be powered with batteries.

The new technology was essential to the survival of radio as a medium. During the Golden Age, families gathered around the big radio in the living room. But when television replaced radio in the home entertainment role, radio moved into the out-of-home music niche. Small, portable boxes made that possible.

How it works (the state of the art)

AM

AM transmissions go all the way back to the early days of radio broadcasts of actual sounds. Once people figured out how to turn sound vibrations into electrical signals (and back again) and how to send signals from place to place with no wire in between, AM radio was a logical next step.

Energy travels from place to place in waves. Actually, it's a little more complicated than that, but for a more precise explanation you'll want to talk to a physics professor. For our purposes, waves are convenient because they provide us with a couple of ways we can transmit a vibration from place to place.

One way is to make changes in the height of the peaks and depths of the valleys. By "modulating" the "amplitude," a sound vibration can be turned into a signal and back again. Amplitude modulation: AM.

Commercial AM signals have some advantages and disadvantages. They tend to "bounce" off the atmosphere, which allows them to travel great distances. On the other hand, they're not as resistant to static, which can affect sound quality.

Because the technology was promoted heavily by big radio companies – most notably RCA – AM broadcasting dominated the market for decades.

FM

The other way to use a wave to send a sound signal is Frequency Modulation. Rather than changing the height of the waves, FM changes the distances between the peaks. Because energy moves at an unchanging speed, the shorter the waves are the more of them you get per second. Thus shorter waves are more frequent, or "higher frequency."

In a larger sense, frequency changes allow broadcasters to send out signals that don't interfere with one another. On a much finer scale, small changes in wave frequency can be turned into sound vibrations.

Pioneered by Edwin Armstrong, FM technology took a back seat to AM during radio's Golden Age. But as radio became more local (so the signals didn't need to go as far) and music-oriented (so sound quality became more of an issue), FM replaced AM as the most important spot on the commercial radio dial.

Satellite

Traditional (AM and FM) broadcasting goes out "over the air," broadcast directly using the public airwaves. Satellite radio, on the other hand, starts at an uplink, bounces off a satellite and returns to radio receivers back on Earth.

SiriusXM – formed from the merger of two satellite radio companies in 2008 – is the biggest player in the U.S. satellite radio market today. Its service includes hundreds of channels, including specialized music stations, sports and channels for celebrities such as Oprah Winfrey and Martha Stewart.

The company’s signals are scrambled and require a special receiver to de-scramble them. SiriusXM charges a monthly subscription fee to listeners. Channels are mostly commercial-free. And because they aren’t “over the air broadcasts,” they can contain controversial content – such as Howard Stern’s shows – that wouldn’t be allowed in transmissions regulated by the FCC.

And unlike satellite television systems, satellite radio receivers are compact and don’t have to point south all the time. So they work in cars and other on-the-go locations as well as back at home.

Hybrid Digital

Surfing the wave of public interest in HDTV, HD is the latest trend in radio broadcasting. Unlike the “HD” in “HDTV” – which stands for “high definition” – on the radio side HD stands for either “hybrid digital” or nothing, depending on which source you believe.

Like HDTV, HD radio represents an improvement in broadcast quality. Unlike FM transmissions (and even-worse AM signals), HD goes out in near-CD audio quality.

Further, HD allows “multicasting,” sending out more than one signal on the same frequency. So rather than just running one broadcast – a CHR station, perhaps – a broadcaster can send out several signals – maybe a jazz station and a news / talk signal on top of the original broadcast. They can also send out text information – such as song names or artists’ bios – along with their audio.

The other “hot” new radio technologies are Internet-based: podcasting and streaming. They’re considered later in the Survival Guide in the Convergence chapter.

Workflow in the workplace

Talk format

Radio is great for two things: playing music and talking. On the “talk” side, radio has evolved “news / talk,” the most popular single format on the radio today.

Most talk shows have a host alternate between expressing his own opinions, talking to guests and taking calls from listeners. Thus a successful talk show needs not only a popular on-air voice to draw listeners but also a skilled producer working behind the scenes to book guests, filter calls and so on.

After the repeal of the Fairness Doctrine in 1987, many talk radio shows began to appeal to audiences by taking political – particularly conservative – stands on issues. “Shock jocks” – talk hosts who specialize in controversial topics – are also big audience draws.

Music format

Playing music over the air is both easier and more complicated than broadcasting a talk show. It doesn't take quite as much coordination. Some stations pick which songs to play based on lists from corporate ownership (often on a nationwide basis). Some employ program directors to monitor both national popularity charts and local trends. Others – particularly smaller stations with fewer employees – allow DJs to program their shows directly.

No matter how songs are picked, the station still has to obtain permission to play them from the songs' owners. Rather than have every station in the world strike a separate deal with every record label or artist, stations generally pay a fee to a licensing agency such as ASCAP and BMI that then make sure song owners receive payment.

As we'll see when we get to formats, music radio is divided up into dozens of different kinds of stations based on what sort of music they specialize in.

Dayparts

Regardless of format, almost every radio station in the United States divides its regular schedule into dayparts.

Arbitron divides the radio day up into five parts:

Morning drive time – 6 to 10 a.m.

Midday – 10 a.m. to 3 p.m.

Afternoon drive time – 3 to 7 p.m.

Evening – 7 p.m. to midnight

Overnight – midnight to 6 a.m.

Broadcast radio dominates audio media consumption in cars, which of course makes morning and afternoon drive times crucial dayparts. The high number of listeners at these times makes them attractive to advertisers.

On the other hand, the overnight daypart generally draws such small audiences that Arbitron usually doesn't monitor radio use overnight.

Industry

How the industry makes money

Formats

Radio stations are almost all divided up by format. The station's format defines what kind of programming it provides for listeners. People who tune into a jazz, classic rock or classical station expect to hear a particular kind of music.

This "product differentiation" is useful not only to consumers but to advertisers as well. If you're selling tickets to an upcoming Christian music festival, you're probably going to be more receptive to the ad reps from a "Religious," "Contemporary Inspirational" or "Southern Gospel" station than to someone from an "Album-Oriented Rock" broadcaster.

The News / Talk format currently draws the largest audiences. However, Country stations vastly outnumber any other format. Because country music appeals primarily to rural listeners, radio reaches the country audience more effectively with lots of small-town stations rather than just a few stations in larger cities. Something to think about if you're considering a career in radio.

Ratings

Businesses pay for ads on radio stations based on the number of listeners tuning in.

The leading source for radio audience research in the United States is Arbitron. The company determines who's listening to what by using a combination of programming diaries and Portable People Meters. People are selected at random based on regional demographics and asked to participate. Diary participants keep track of their listening on a printed form. PPM participants wear a small portable device that tracks listening habits by picking up inaudible signals from radio broadcasts.

Arbitron makes money by selling its reports to stations that want to know how well they're doing and advertisers who want to know where to place ads. However, you can get at least some general overview statistics (including station ratings for specific cities) by signing into Arbitron's site and providing some personal information. For more specific data such as ratings for particular shows or times of day, you'd have to pay to subscribe.

Local stations / national broadcasts / syndication

In its heyday, radio programming was provided mostly by centralized networks much the way television works today (indeed, NBC, CBS and ABC were all originally radio networks). Responding to competition from television in the 1950s, radio went from national programs to local music and talk.

Today most stations carry a combination of local, network and syndicated content. A station might start the morning with news from a national network, switch to a local call-

in show after morning drive time ends, and run a syndicated program such as Rush Limbaugh in the afternoon.

Be careful to understand the difference between station ownership and network affiliation. While Clear Channel owns more stations than any other company, Westwood One is the largest radio network currently in operation in the United States.

Who owns what

In radio's Golden Age, the Radio Corporation of America ran the show. A subsidiary of General Electric, RCA held many of the patents for technology in use in the medium's early years, which of course gave it a head start in the industry.

Under the leadership of David Sarnoff, RCA established the National Broadcasting Company, the world's first radio network. The operation soon became so large that it split into two different networks: NBC Red and NBC Blue. Then it got so big that the Justice Department filed an antitrust suit against it, and the Blue Network eventually became ABC.

The demise of radio networks as major media market players coincided with the downfall of RCA, which was sold by GE then re-purchased and broken up.

Today large media corporations focus more on station ownership than network content creation. The biggest fish in the pond is Clear Channel, which owns nearly 900 stations in the United States. However, some other corporations (such as Disney and Cox) that own a few stations are actually larger than Clear Channel thanks to their holdings in other media.

For a good run-down of which company owns what, see the FCC's listings or freepress.net's summary of the major players.

Careers

In the corporate world

A professional doing-it-for-money radio station typically hires some combination of the following people:

On air – The person whose voice you actually hear on your radio. A disc jockey is generally responsible for playing music as well as talking between (please not over, because that is soooo annoying) the songs. Talk hosts interview guests and frequently respond to calls from listeners.

Producer – The producer is the on-air talent’s best friend. She books guests, screens callers, schedules remote broadcasts and generally takes care of the behind-the-scenes stuff that requires taking care of.

Traffic / Continuity – No, not the person in the helicopter keeping track of bottlenecks on the highways. The traffic coordinator is responsible for the daily programming log that specifies what content runs where. She’s in charge of deciding what programs, songs, announcements, and so on will run where.

Engineer – Someone has to keep the electronics running. As you can probably imagine, this position requires a fair amount of technical expertise.

Promotions – Radio stations attract listeners by building community awareness with remote broadcasts, concert sponsorship and the like. Promotions pros are responsible for everything from arranging for DJs to broadcast from outside locations to getting the give-away T-shirts and coffee mugs printed with the station’s logo.

Ad sales – Broadcast radio is a direct payment medium, which means that advertising revenue pays the bills (not to mention everyone’s salaries). Ad sales folks – supervised at larger stations by an ad manager – don the business suits and head out into the world to convince businesses to run ads on the station.

Station manager – The general manager answers only to the owner, so she’s the boss of everyone else at the station.

DIY

LPFM

Radio station ownership is an expensive business. The FCC seldom issues new licenses to transmit in the AM and FM frequencies, so generally the only way to get one is to buy a company that already owns one. Needless to say, we’re talking about more money than most of us keep in our checking accounts.

The potentially big exception to this rule is Low Power FM broadcasting. Under FCC rules, state and local governments and non-profit organizations (such as colleges) can apply for a license to broadcast on the commercial FM spectrum. But here’s the trick: the transmitter’s power can’t be more than 100 watts and the antenna can’t be more than 100 feet higher than the average terrain around it. In practical terms, that produces a signal that travels only about three and a half miles.

An LPFM broadcaster still has to have a construction permit to set up a station and a license to broadcast. And if you're looking for a way to make money in the radio business, don't look at LPFM. Commercial broadcasts are prohibited on LP licenses.

On the other hand, at least it's possible to get such a license without spending a jillion dollars.

In theory, that is. Even though LPFM licenses are supposed to be available, lobbyists from the pros – particularly the National Association of Broadcasters – have worked hard to make it hard for new LP applications to get through the process.

Sub-LPFM transmissions don't require an FCC license at all, and you can do pretty much whatever you want on the air. But now we're talking about signals so weak that they travel no more than 200 feet or so.

Podcasting

Podcasting is described in greater detail in the chapter on Media Convergence. However, I thought I'd throw in a tip or two here about how to podcast for money. The formula is deceptively simple: find something you can podcast about that people will want to hear, and then find a way to get them to give you money for it.

On the first part, I'm afraid you're on your own. I don't have a ton of wisdom about what people will and won't listen to (if I could make that prediction accurately, I'd be making a ton of money in the radio consulting business). In general, however, I advise you to come up with something that nobody else is doing. Podcast about something you actually know something about. Make it relevant, useful and interesting. And avoid things like copyright violation that can get you into legal trouble.

If you're going to get paid, you'll probably have to do a little marketing to draw attention to your podcast. From there you'll either have to get people to pay you directly for your content or find sponsors. Direct payment can come from voluntary donations or subscriptions, though a start-up podcast may have trouble finding listeners willing to pay to subscribe. Sponsors may pay for ads in your podcast itself (though consider the effect this may have on your audience) or for ads on your pages if you're podcasting from a web site.

Some bloggers and podcasters receive money from companies in exchange for giving products favorable mention. Carefully consider the ethical questions this raises about your audience's trust before you start down this path.

The Dark Side: Pirate Radio

So what keeps you from just buying (or building) a full-strength transmitter and hopping right into the radio business without getting a license from the FCC? After all, that would absolve you from the (impossible) process of getting a license and the (potentially difficult) task of complying with broadcast regulations. And as long as you're breaking the law anyway, why not play music without paying (expensive) royalties?

Obviously breaking the law is a problem. Plus you'll be doing it strictly for fun, as you aren't likely to get a lot of businesses to pay for ads in an illegal broadcast.

Further, you stand a pretty good chance of getting caught. Unlike some kinds of clandestine communication, a continuously-broadcast radio signal isn't all that hard to trace to its source. You can move the transmitter around (broadcast from a boat or even the back of a van), but that's more likely to give your listeners trouble trying to find you than to be an effective way to hide from the authorities.

Penalties may include fines of \$10,000 per day of operation, up to a maximum of \$75,000. The government will also confiscate all your equipment (not just the transmitter but also mixing boards, disc players and other gear used in your broadcast). If you're found guilty of "willfully and knowingly" broadcasting illegally, you can face additional fines and jail time.

And if you're planning a career in radio, the pirate thing isn't a great résumé item. Anyone found guilty of pirate broadcasting is automatically prohibited from later applying for any FCC license. That's a career dampener if not a complete career ender.

Getting started

As usual, any career choice starts with the five steps outlined in the "Starting a Career" entry in the "Tell Me More" section. But here are some radio industry specifics:

Most radio stations broadcast all day every day. So as you can probably imagine, many entry-level jobs – especially for on-air people – are during the middle-of-the-night shifts. Larger, more profitable broadcasters tend to hire talent from smaller stations. Thus it probably wouldn't hurt to learn about different musical genres just in case your first job isn't with a station that plays your kind of music.

You may also be surprised to learn that even on-air folks who only appear to work a few hours a week actually have much more extensive job obligations behind the scenes.

If you want an on-air job, you'll need not only a résumé but also air checks, a set of recordings of your previous work.

And again as usual, below you'll find links to some industry organizations and other groups you might want to look at.

Ethics

Personal morality and the profession

Martians invade New Jersey

On October 30, 1938, invaders from Mars attacked Grover's Mill, New Jersey. Or at least that's what the radio said.

For Halloween, The Mercury Theatre on the Air decided to do a dramatic performance of *The War of the Worlds*, a novel by H.G. Wells about a Martian armada landing on Earth and destroying London. Rather than perform the piece as a straight reading or a traditional dramatic production, director Orson Welles decided to do a show that simulated what a radio broadcast might sound like if we were really being attacked by aliens.

The broadcast began with a brief explanation of the production and a reading of the first few paragraphs of the novel, so listeners would know that what they were hearing wasn't real. Then they started what sounded like a musical program.

Before long, however, the music was interrupted by "on scene" reports supposedly from Grover's Mill, where a mysterious object crashed down from outer space. A "reporter" interviewed some "witnesses." Then something emerged from the object and began setting fire to everything and everyone. Scary noises. Screams. Then nothing.

As the show continued, more "news reports" came in about the Martian invasion. The situation grew worse and worse until finally the fake broadcast went off the air. For the rest of the broadcast Welles performed a monologue describing how the invaders trashed the planet only to be defeated by Earth germs to which their bodies had no immunity.

People panicked. As many as nearly two million listeners thought the attack was real. Many of them had tuned into the broadcast late and missed the "this is fiction" disclaimer at the beginning. Further, in 1938 the world stood at the brink of another global war, so tensions were already high. And back then people were a little more inclined to trust the media. After all, why would the CBS network waste its airtime on a prank? Newsflashes were supposed to be reliable.

The panic died down quickly, and Welles apologized for scaring everyone (though the end of the script did make it sound at least a little as if he knew what effect it might have on listeners). But the broadcast raised serious questions about the power of radio and the responsibility of media professionals to their audiences.

Industry self-regulation

Network S&P

In the United States the content of broadcast radio and television is subject to government regulations that don't apply to any other media. As a result, the "do's and don'ts" of

broadcasting tend to be determined by FCC rules rather than an industry-wide system of self-regulation.

However, many broadcasters have “standards and practices” departments that have at least some authority over programming content. S&P rules help assure that broadcasts don’t violate FCC rules. They also fill in some “grey areas” about content that doesn’t violate the law but might offend some listeners.

For example, in the wake of the September 11 attacks, radio giant Clear Channel distributed a memo with a list of songs with “lyrically questionable” content. Though the memo didn’t actually order stations not to play songs on the list ... well, imagine yourself as a program director and decide whether or not you’d have a DJ play a song your corporate employer just called “lyrically questionable.”

Law

The First Amendment and free speech

PICON

Early government regulation of the radio industry focused mostly on ironing out frequency disputes, keeping stations from broadcasting on top of one another’s signals. However, the Radio Act of 1927 included a clause that required anyone who obtains a license to broadcast over the public airwaves do so in accordance with “public interest, convenience or necessity.” This standard – known as PICON for short – allowed the government to impose restrictions on broadcasters that wouldn’t be possible in any other medium.

The First Amendment prohibits the government from restricting the right to speak or publish what we want. But broadcasters give up a little of that right in order to obtain the right to use the airwaves to communicate. The government’s authority to make such a demand was based on the public nature of the broadcast spectrum (the airwaves belong to everyone) and their scarce nature (only a limited number of broadcasters can use the airwaves without interfering with each others’ signals).

So when studying the FCC-controlled media (television and radio stations that broadcast over the air), always keep in mind that they’re restricted in ways that don’t apply elsewhere in the infoscape.

Government regulation

FCC complaints

Take a look at the list on the FCC’s web site and you’ll notice right away that there are a lot of things you can file a complaint about. However, the complaints that concern us directly here are about “obscene, indecent or profane material.”

“Obscenity” is a narrow category of prohibited speech rarely encountered in mainstream media. On the other hand, “indecent or profane” speech – which the government can’t ban in other media – is restricted in broadcasts by FCC licensees who use the public airwaves to communicate. And indecency and profanity are much broader than obscenity.

The FCC defines indecency as “language or material that, in context, depicts or describes, in terms patently offensive as measured by contemporary community standards for the broadcast medium, sexual or excretory organs or activities.” Inside the “safe harbor” times of day (6 a.m. to 10 p.m.), indecent material is banned from the airwaves.

Audience members who see or hear something they consider indecent on the air can file a complaint with the FCC. The commission investigates all complaints about broadcasts that might actually have been indecent (bogus complaints are dismissed). If the commission finds that an indecent broadcast took place, it issues a Notice of Apparent Liability to the broadcaster, which can then challenge the ruling.

Stations found “guilty” of violating the rules get hit with a Forfeiture Order. These orders can range from slap-on-the-wrist “warnings” to total revocation of the station’s broadcast license. Warnings are common for minor offenses, particularly if the broadcaster doesn’t have a history of complaints or if the “indecency” in question is something the FCC has never tackled before. For repeat offenders, fines – sometimes hefty – are more likely. Loss of license is a rare occurrence, but it does sometimes happen.

Payola

“Payola” is bribery, usually involving a record label paying a DJ to play its music on the air. After controversy arose about the practice in the late 1950s, the FCC adopted a rule making the practice illegal.

On the surface this seemed fair. The public airwaves should be for the music listeners wanted to hear, not for whomever bribed their way onto the air. It seemed like a good way to keep big business from dominating the airwaves.

But there’s more to it than that. Complaints about the practice started not with smaller labels who couldn’t get airtime but with the big record companies who were concerned about keeping competition down. The big players had the funds for big media campaigns, including advertising and other expensive promotions to stir up demand for their products. Smaller labels, on the other hand, had an easier time getting their songs on the air by slipping DJs a few bucks rather than trying to compete head-to-head with the big boys in the PR arena.

And of course on the radio side it was the often-underpaid and politically-powerless DJs on one side and the radio station owners who weren’t getting any bribe money on the other.

The problem had a racial dimension as well. Many of the artists with big label contracts were aligned with ASCAP, while lesser-known black artists from the South were more likely to be BMI clients.

Though the practice has been prohibited for half a century, it continues to be an issue in the industry.